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ABSTRACT

This report presents ratios, formulas, and recommendations regarding the staffing of school systems with special concern given to the number of administrators and supervisors needed to most effectively administer the schools. Educational Research Service (ERS) obtained information from the following sources: a) ERS information files, b) National Educational Association (NES) publications, c) Educational Resources Information Center (ERIC) files, d) NEA Research Division's Negotiation Research Unit files, and e) state departments of education and local school systems enrolling 12,000 or more pupils. Information on ratios concerned the following personnel: district-wide total professional staff, district-wide total administrative staff, superintendent and his assistant, instructional supervisors, audiovisual and instructional materials specialists, special education administrators and teachers, pupil personnel departments, total school building staff, principals, assistant principals, other school administrative personnel, classroom teachers, elementary special subject teachers, librarians, paraprofessional personnel/teacher aides, and classfied personnel (e.g., clerical, secretarial). A 128-item bibliography is included. (MJM)

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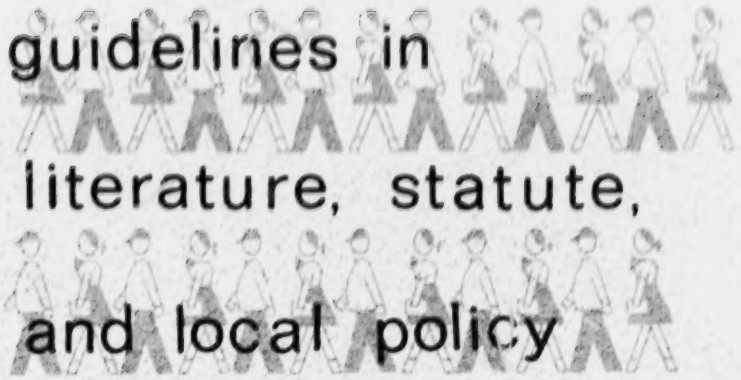
SCHOOL STAFFING RATIOS

guidelines in literature, statute, and local policy



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"I think the optimum pupil-teacher ratio ought to be 20 to 1... twenty teachers to one student."

ERS CIRCULAR No. 3, 1972 April 1972

SCHOOL STAFFING RATIOS: GUIDELINES IN LITERATURE, STATUTE, AND LOCAL POLICY

A school administrator's perennial problem when budget time rolls around is to justify maintaining or increasing the number of persons on the school system payroll. This annual occurrence is marked by an increase in the number of requests to ERS to provide a model or guidelines for staffing school systems, particularly guidelines on the number of administrators and supervisors needed to most effectively administer the schools.

There is, of course, no single document which provides a clear-cut answer to the above request, and the ERS staff has spent many hours in an effort to find staffing recommendations which apply to the particular situation of the individual inquirer. Each time such a search has been made, copies of the material collected have been put into the information files, resulting in a folder full of "bits and pieces" of recommendations and suggestions developed by many individuals, school systems, and organizations. A publication presenting all of the available information under one cover seems appropriate.

In its attempt to locate as many staffing recommendations as possible, ERS used not only the material in the above-mentioned folder, but also publications in the NEA Research Division Staff Library, the ERIC microfiche collection, and the files of the Research Division's Negotiation Research Unit. In addition, requests for recommended ratios went out to all state departments of education and to local school systems enrolling 12,000 or more pupils. The result of these efforts is this Circular, which presents, without comment or evaluation, the various staffing ratios and formulas the search uncovered. Although we could not hope to pinpoint every recommendation ever made, we are confident that we have included in the tables beginning on page 3 the research and opinions of the most prominent authorities on the subject.

Like the alchemist's quest for the formula to turn base metal into gold, our search has not turned up a tested model which has received general acceptance in the educational community. The problems of developing a model to fit all situations are obvious when one considers the various factors that can affect the number and type of personnel a school system should employ. D. Richard Wynn (see page 5 of bibliography reference 124) has pointed out the most prominent these, as follows:

1. The size of the school system.
2. The size, number, and location of schools in the system.
3. The wealth of the community.
4. The purposes of the school system.
5. The administrative and supervisory services needed to support these purposes.
6. The pattern of organization of the staff.
7. The capabilities and abilities of individual staff members.
8. The demands placed upon staff by the public and/or the board.

Note that Wynn mentions the organizational pattern of the school system. An earlier ERS study[1/] shows that there is also no model organizational pattern for the local school system, regardless of size.

It should be cautioned, too, that no formula or model can take into account the skills and experience of the personnel used to fill that ratio. For instance, 20 teachers picked at random will fulfill a staffing ratio of 20 teachers: 400 pupils, but may not provide the exact mix of skills necessary to provide a good education program for those 400 pupils. Precise specifications for each office, school, program, and position are necessary.

Some general stipulations should be understood before examining and using the tables beginning on page 3.

1. Numbers following the group or individual cited as the source of the ratio or

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1/ Structuring the Administrative Organization of Local School Systems, ERS Circular No. 2, 1970. February 1970. 43 p. Out of print. (Available in libraries and on a loan basis from ERS.)

formula in each table refer to a specific entry in the bibliography beginning on page 63. The number following the colon (:) refers to the page within the entry, on which the recommendation appears. Thus an entry such as 99:54 means that the ratio appears on page 54 of bibliography reference 99.

2. Unless otherwise stated by the source of a ratio, it has been assumed that the ratio applies to full-time equivalents.

3. It is also assumed that the recommendations apply only to properly certified personnel (except in the case of paraprofessional and classified positions).

4. Except where necessary to distinguish between two similar positions which vary in number of working days and therefore in salary, the length of contract year has been omitted since this would be subject to local practice.

5. The ratios reported are only those recommended, on whatever basis used by the source. They are not necessarily actual staffing ratios. To examine actual ratios in various areas and for various years, the reader is referred to bibliographic references 15, 16, 24, 26, 39, 56, 61, 65, 66, 77, 81, 95, 99, 104, 108, 111, and 117, among others.

6. Unless otherwise stated by the source, pupil figures are actual enrollment. Notable exceptions are ratios based on state foundation program allotments, which sometimes do not specify enrollment, ADA, or ADM. In some special education and pupil personnel ratios, the measure is "cases," that is, eligible pupils.

7. Many "obvious" recommendations have been eliminated, such as "one principal per school" and "sufficient personnel," or "as necessary."

8. All ratios are reported so that the personnel under discussion appear first in the ratio, e.g., teacher-pupil ratios, supervisor-teacher ratios.

9. Unless otherwise stated by the source, the term "teacher" in the ratios given in Tables 21-26 applies only to regular classroom teachers. Elementary special subject teachers, special education teachers, librarians, counselors, and the like, are excluded.

10. No attempt has been made to standardize the administrative titles found in ratios, e.g., unless otherwise stated in a particular ratio, the reader should assume that a vice-principal is the same as an assistant principal. The titles used in the original source have been carried through to this publication.

11. Often it was not possible to tell from the source whether the ratio recommended is "minimum," "adequate," "optimum," or other degree of sufficiency. Where this could be discerned, it is noted. Unless otherwise stated, state ratios are minimums.

12. If a particular instructional level is not specified in a table, it is assumed to apply district-wide.

13. Ratios attributable to another source, wherever this could be ascertained, were not used, i.e., if an author quoted or paraphrased another source in stating a ratio, only the primary source was used. Such instances were infrequent.

The reader is cautioned to examine carefully the title and column headings of each table before using the ratios in that table. The following is an index to the personnel included in Tables 1-32.

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District-wide total administrative staff	2	4
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Special education administrators and teachers	6	9
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Personnel	Table	Page	Personnel	Table	Page
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Junior high school	25	41	teacher aides	29	49
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Table 1

DISTRICT-WIDE RATIOS OF TOTAL PROFESSIONAL STAFF TO STUDENTS

Recommended ratio	Source	Remarks
47.5:1000 pupils	Warren, Mich., negotiation agreement	
48.1:1000 pupils	Swanson (109:22)	Mean ratio of total professional staff to students in "high expenditure schools. . . well above average in system and staff quality," based on data gathered in schools in 132 districts in 33 states.
1:17 pupils	Croton-Harmon School District, N.Y., negotiation agreement	
1:25 pupils	Parchment, Mich., negotiation agreement	
50:1000 pupils	1967 NEA resolution; Educational Policies Commission (78:17); Castetter, Griffiths, Felker (16:30). Negotiation agreements of Baltimore City and Washington County, Md.; Sudbury, Mass.; Yonkers, N.Y.	For immediate implementation in Sudbury, Mass., and Yonkers, N.Y.; goal in Baltimore City and Washington County Schools, Md.
50.4:1000 pupils	Harford County, Md., negotiation agreement	
51.7:1000 in ADA	Texas Governor's Committee (110:20)	
51.8:1000 pupils (immediate implementation); 53.0:1000 pupils (goal)	Howard County, Md., negotiation agreement	
53.2:1000 pupils	Firman (39:107)	Based on measurements of the quality of two groups of Quality Measurement Project School Systems in New York State; systems rating "excellent" had this mean staffing ratio.
56:1000 pupils	Montgomery County, Md., By-Law of the Board	Maximum number of professional employees per 1000 pupils.

(Continued)

Table 1 (Continued)

Recommended ratio	Source	Remarks
57:1000 pupils	South Brunswick Township, N.J., negotiation agreement	
60-70:1000 pupils	1963 resolution of the Association for Supervision and Curriculum Development	Includes a 1:25 classroom teacher-to-pupil ratio.
60:1000 pupils	Clinton, N.Y., negotiation agreement	55 of the 60 professional staff members are to be members of the instructional staff (goal)
60-68:1000 pupils	New York State Teachers Association (82:2)	
65:1000 pupils	NEA Office of Professional Development and Welfare (74:17)	
68:1000 pupils	McKenna (67:8)	Based on Associated Public School Systems schools of high quality
125:2000 pupils	Adams-Cheshire School District, Mass., negotiation agreement	Goal

Table 2

DISTRICT-WIDE RATIOS FOR ADMINISTRATORS

Recommended ratio	Source	Remarks
3:1000 pupils	Castetter, Griffiths, and Felker (16:30)	Includes only "administrators"
In districts of 599 pupils or less, 1:113 in ADA In districts of 600-1399 pupils, 1:177 in ADA In districts of 1400-2199 pupils, 1:195 in ADA In districts of 2200-2999 pupils, 1:204 in ADA In districts of 3000-3999 pupils, 1:222 in ADA In districts of 4000-4999 pupils, 1:223 in ADA In districts of 5000-5999 pupils, 1:245 in ADA In districts of 6000-17500 pupils, 1:315 in ADA	Council for Administrative Leadership (26:21)	Median size of administrative staff for "optimum administrative effectiveness" according to opinions of superintendents in 597 school systems in New York State in 1957.
18 "specialists":1000 pupils	McKenna (67:36)	Includes all certificated personnel except classroom teachers
1:250 pupils or 10 teachers	Phelps (89:133-34)	"Administrator" may be an assistant superintendent, principal, assistant principal, director, coordinator, supervisor, etc.

(Continued)

Table 2 (Continued)

Recommended ratio	Source	Remarks
5- 7:1000-1200 in ADM 6- 8:1200-1400 in ADM 7- 9:1400-1600 in ADM 8-10:1600-1800 in ADM 9-11:1800-2000 in ADM 9-12:2000-2200 in ADM 10-13:2200-2400 in ADM 11-14:2400-2600 in ADM 12-15:2600-2800 in ADM 13-16:2800-3000 in ADM 14-18:3000-3500 in ADM 16-22:3500-4000 in ADM 18-25:4000-5000 in ADM	Wynn (124:8)	"Minimum number of full-time administrators and supervisors"
9:100 teachers in elementary school districts; 8:100 teachers in K-12 districts; 7:100 teachers in high school districts	California Education Code	
"Administrative and special instruction units" are determined by dividing the total number of basic classroom, vocational, and exceptional children units by 8.	Kentucky State Department allotments	Includes such positions as superintendents, principals, librarians, and industrial arts and P.E. teachers.
1:30-49 teachers 2:50-199 teachers 3:200-399 teachers + 1 additional for each 199 additional teaching positions up to 2000; + 1 for every 300 teachers thereafter	Tennessee State Department regulations	Ratios apply to "system-wide positions" only.
5:1000 pupils	Clinton, N.Y., negotiation agreement	Excludes all members of the "instructional staff"

Table 3

SUPERINTENDENT AND HIS ASSISTANTS

Position	Recommended ratio	Source
Superintendent	In districts of less than 300 pupils may also be appointed elementary and high school principal; at least 1/2-time in all districts	Kansas State Department accreditation standards
Deputy superintendent (or other top assistant to superintendent)	Should be added when number of teachers exceeds 250	AASA (2:87)
Administrative assistant or part-time intern to superintendent	Should be added when number of teachers reaches 50-250	AASA (2:86)
Assistant superintendent	1:250 state units of pupils (300 be- beginning July 1, 1972); not to exceed 2 per district	Delaware statute
Administrative assistants	1 per district	Delaware statute

(Continued)

Table 3 (Continued)

Position	Recommended ratio	Source
Directors	1:150 state units of pupils (200 beginning July 1, 1972) + 1 for each additional 100 state units, not to exceed 6 per district	Delaware statute
Supervisors of transportation	1:7000 or more transported pupils	Delaware statute
Assistant for business	Should be added with no less than 1500 pupils	Griffiths, Clark, Wynn, and Iannaccone (45:169)
Assistant superintendent for personnel	Should be added when number of teachers reaches 100	AASA (2:90)
Personnel administrator	Should be added when number of teachers reaches 200	Yeager (127:545)
Personnel director (+ secretary)	Should be added when number of classroom units reaches 150	Chandler and Petty (17:527)
Personnel office	1 professional + 3 clerical:1000 certificated staff (minimum)	AASPA (5:22)
Personnel department	Overall ratio of 1 personnel department employee to 100-150 employees district-wide, as follows: Less than 100 employees, 1 personnel clerk to assist superintendent 100-300 employees, 1 personnel administrator + 1 clerk 301-400 employees, add 1 more clerk 401-599 employees, add 1 administrator 600-699 employees, add 1 clerk 700-899 employees, add 1 administrator 900-999 employees, add 1 clerk 1000-1200 employees, add 1 administrator	Fawcett (34:143-44)

Table 4

CENTRAL OFFICE INSTRUCTIONAL ADMINISTRATORS AND SUPERVISORS

Positions	Recommended ratio	Source
Assistant superintendent for educational program	1:5000 or more pupils	Griffiths, Clark, Wynn, and Iannaccone (45:200)
Assistant superintendent for instructional services	1:20,000 or more population	Freese (40:108)
Assistant superintendent for instruction	Essential--1:500 teachers Desirable--1:200 teachers or more	Georgia State Department accreditation standards
Instructional specialists	7:1000 pupils	Castetter, Griffiths, and Felker (16:30)
Supervisor of instruction	1:35 teachers	Philadelphia Area School Study Council (90:3)

(Continued)

Table 4 (Continued)

Position	Recommended ratio	Source
Director of instruction	1 per school system	NEA Research Division (75:16)
Supervisors of instruction	1:300 in ADA	Gilmer-Aikin Committee in Texas (110:20)
Supervising teacher of instruction	1/2:30-49 teachers 1:50-199 teachers 1-2:200-399 teachers 2-3:400-599 teachers 3-4:600-799 teachers 4-5:800-999 teachers 5-6:1000-1199 teachers	Tennessee State Department regulations
Supervisors	1(10-month):100 state units (150 beginning July 1, 1972)	Delaware statute
Supervisor of instruction	1/2:25.0-49.9 pupil units 1:50.0-149.9 pupil units 2:150.0-249.9 pupil units 3:250.0-349.9 pupil units + 1 additional for each 100 additional pupil units	Kentucky State Department allotments
Supervisors of instruction	1:100 instructional units or major fraction thereof	Florida statute
Supervisors and curriculum directors (junior high)	1/2:101-300 pupils 1:301-600 pupils 2:601-1000 pupils 3-6:1001-2000 pupils	Gruhn and Douglass (47:360)
Instructional coordinator	1 per senior high school in 1972-73	Columbus, Ohio, administrative guideline
Curriculum specialist	1:50 teachers (desirable)	Georgia State Department accreditation standard
Curriculum coordinator (secondary)	1/2:up to 1000 pupils 1:1000 or more pupils	Lake County, Fla., staffing formula
Supervisor or consultant in art	1:50 teachers (maximum)	National Art Education Association (70:13)
Art consultant	1:100-200 teachers	AASA (4:113)
Art consultant	1:50 teachers	NEA Research Division (75:16)
Reading/language arts consultant	1:400-500 teachers	AASA (4:113)
Reading consultant	1:40 teachers	NEA Research Division (75:16)
Music consultant	1:100-200 teachers	AASA (4:113)
Music consultant	1:50 teachers	NEA Research Division (75:16)
Physical education consultant	1:100-200 teachers	AASA (4:113)
Physical education consultant	1:50 teachers	NEA Research Division (75:16)
Director of health and physical education (secondary)	1/6-1/3:300-800 pupils 1/4-1/2:800-1500 pupils 1/2-1:1500-3000 pupils	Douglass (30:56)

(Continued)

Table 4 (Continued)

Position	Recommended ratio	Source
Health education specialist	6/10 per junior high school	La Mesa-Spring Valley School District, Calif., staffing formula
Director of health education	1:5000 pupils	Reeder (94:439)
Supervisor of kindergartens	1 per school system	NEA Research Division (75:16)
Director of adult education	1/2:each adult school of 2000-3000 1:each adult school over 3000 pupils Additional 1/2 for each 1000 pupils over 3000	Wynn (124:9)
Special teacher	1 in each special curriculum area for every 20 elementary teachers	Philadelphia Area School Study Council (90:2)

Table 5

AUDIOVISUAL AND INSTRUCTIONAL MATERIALS SPECIALISTS

Position	Recommended ratio	Source
Consultant in instructional materials	1:200-500 teachers	AASA (4:113)
Materials supervising teacher	1/2:30-199 teachers 1:200 or more teachers	Tennessee State Department regulations
Audiovisual methods specialist	1:50 teachers	NEA Research Division (75:16)
Audiovisual specialist (school building)	1/2:15 or less teachers 1:16-30 teachers 1 additional full-time for each additional 40 teachers or major fraction thereof	NEA Department of Audiovisual Instruction (73:5)
Audiovisual specialist (districtwide)	1 when district has 4 elementary schools and 1 high school	
Audiovisual assistant (semi-professional)	1:30 teachers	
Audiovisual technician	1:7500 in ADA	Stoops and Rafferty (106:311)
Media specialist (media center)	1:250 pupils	ALA and NEA (6:12)
Media technician (school)	1 + 1 media aide for each media specialist in schools of 2000 or less pupils	ALA and NEA (6:16)
Media specialist (elementary school)	1 per elementary school	Vancouver, Wash., negotiation agreement
Media personnel (senior high school)	1/2:less than 300 pupils 1:300-1499 pupils 2:1500 or more pupils	North Central Association (83:191)
Media specialist (secondary schools)	1:700 pupils	Southfield, Mich., negotiation agreement

(Continued)

Table 5 (Continued)

Position	Recommended ratio	Source
Media specialist (school)	1:900 or more pupils	Indiana State Department rule
Teacher time assigned to A-V aids (junior high school)	2 periods per day	San Francisco, Calif., staffing formula

Table 6

SPECIAL EDUCATION ADMINISTRATORS AND TEACHERS

Position	Level	Recommended ratio	Source
Director of special education	District-wide	1 per district of 15,000 pupils	Illinois State Department (53:9)
Supervisors of special education	District-wide	1:3-6 teachers	Illinois State Department (53:9)
Supervisor of handicapped children	District-wide	1 per district	NEA Research Division (75:16)
Special education teachers	District-wide	1:10 or more cases	Florida statute
Special education teachers	District-wide	2,86:1000 pupils	Warren, Mich., negotiation agreement
Special education teachers	Secondary	1:18 cases	Fairhaven, Mass., negotiation agreement
Special education teachers	District-wide	1:15 cases	Kodiak Island, Alaska, negotiation agreement
Special education teachers (except emotionally disturbed)	District-wide	1:15 cases	Ann Arbor, Mich., negotiation agreement
Special education teachers	District-wide	1:6 cases to 1:20 cases based on type of handicap	Bonham (11:48)
Special education teachers	District-wide	1:12 cases	New Mexico State Department accreditation standard
Teachers of emotionally disturbed	District-wide	1:8 cases in ADA (minimum) 1:12 minimum average monthly caseload	Tennessee State Department regulations
Teachers of emotionally disturbed	District-wide	1:8 cases	Ann Arbor, Mich., negotiation agreement
Coordinator of education of the mentally retarded	District-wide	1 per district with more than 25,000 pupils, in which at least 50% of the mentally retarded are in public classes	California Education Code

(Continued)

Table 6 (Continued)

Position	Level	Recommended ratio	Source
Teachers of emotionally disturbed	See next column	Self-contained classes: Pre-kindergarten, 1:4 cases Primary, 1:5 cases Intermediate, 1:6 cases Secondary, 1:10 cases Itinerant caseloads: Elementary, 1:12 cases per week Secondary, 1:15 cases per week	Rossmiller, Hale, and Frohreich (98:97) (based on opinions of special education directors and teachers)
Teachers of neurologically and emotionally disturbed	District-wide	1:3-8 cases	Sessions (100:174); opinions of Ohio elementary principals (92:147)
Teachers of socially maladjusted	District-wide	15-20:300 cases	Illinois State Department (53:9)
Teachers of emotionally disturbed	District-wide	15-20:150 cases	Illinois State Department (53:9)
Adjustment teacher	Elementary	1:18 cases	San Diego, Calif., staffing formula
Teacher of children with behavioral disabilities	Elementary Secondary	1:7-12 cases 1:10-12 cases	Baltimore County, Md., staffing formula
Teacher of educable mentally retarded	Elementary	1 certificated staff unit:18 cases	Ocean View Elementary School District, Calif., staffing formula
Teachers of educable mentally retarded	Junior high school	1:15 cases (maximum) if age span is more than 4 years; 1:18 cases (maximum) if age span is 4 years or less	La Mesa-Spring Valley School District, Calif., staffing formula
Teachers of educable mentally retarded	District-wide	1:10 cases in ADA (minimum) 1:minimum average caseload of 20 per-month	Tennessee State Department regulations
Teachers of educable mentally retarded	See next column	Primary (ages 6-9), 1:9 cases Intermediate (ages 10-12), 1:11 cases Middle and junior high (ages 13-15), 1:14 cases Secondary (ages 16-19), 1:17 cases	Rossmiller, Hale, and Frohreich (98:64) (based on opinions of special education directors and teachers)
Teachers of educable mentally handicapped	District-wide	20-22:300 cases	Illinois State Department (53:9)
Teachers of mentally handicapped	District-wide	1:20 cases	NEA Department of Rural Education (55:16)
Teachers of educable mentally retarded	Elementary	1:18 cases	San Diego, Calif., staffing formula
Teachers of educable mentally retarded	Elementary Secondary	1:10-15 cases 1:15-20 cases	Baltimore County, Md., staffing formula

(Continued)

Table 6 (Continued)

Position	Level	Recommended ratio	Source
Directors of instruction of gifted and/or mentally handicapped	District-wide	1-1/2-2:2000 pupils	Wynn (124:9)
Teachers of severely mentally retarded (trainable)	District-wide	1:minimum of 8 cases in ADA	Tennessee State Department regulations
Teachers of trainable mentally handicapped	District-wide	2-3:30 cases	Illinois State Department (53:9)
Teacher of trainable mentally retarded	Elementary	1 certificated staff unit:12 cases	Ocean View Elementary School District, Calif., staffing formula
Teachers of trainable mentally retarded	Ungraded elementary	1:12 cases	San Diego, Calif., staffing formula
Teachers of trainable mentally retarded	Elementary Secondary	1:7-10 cases 1:10-12 cases	Baltimore County, Md., staffing formula
Teacher of pupils with multiple disabilities	District-wide	1:minimum of 8 cases in ADA	Tennessee State Department regulations
Teachers of multiply handicapped	District-wide	1-2:7 cases	Illinois State Department (53:9)
Teachers of physically handicapped	District-wide	2:15 cases	Illinois State Department (53:9)
Teachers of physically handicapped	District-wide	1:18 cases	NEA Department of Rural Education (55:17)
Teachers of crippled	Elementary Secondary	1:7-10 cases 1:10-15 cases	Baltimore County, Md., staffing formula
Specialist in education of physically handicapped	District-wide	1/2:2000 pupils	Wynn (124:9)
Teachers of educationally handicapped	Junior high	1:12 cases in ADA (if age span is 3 years or less, 1:11 maximum; if age span is more than 3 years, 1:9 maximum)	La Mesa-Spring Valley School District, Calif., staffing formula
Teacher of educationally handicapped	Elementary	1 certificated staff unit:12 cases	Ocean View Elementary School District, Calif., staffing formula
Teachers of educationally handicapped	K-2 3-6	1:8 cases 1:11 cases	San Diego, Calif., staffing formula
Teachers of pupils with learning disabilities	District-wide	1:minimum of 8 cases in ADA 1:minimum monthly caseload of 12	Tennessee State Department regulations
Teachers of pupils with learning disorders	District-wide	15:150 cases	Illinois State Department (53:9)

(Continued)

Table 6 (Continued)

Position	Level	Recommended ratio	Source
Teacher of educationally handicapped/ learning disability	Elementary	1 teacher per school per 8 cases	Ocean View Elementary School District, Calif., staffing formula
Teachers of pupils with learning disabilities	Elementary	1:8 cases	San Diego, Calif., staffing formula
Teachers of visually handicapped	District-wide	Partially seeing--1:minimum of 10 cases in ADA Blind and/or partially seeing--1:minimum average monthly caseload of 10 pupils 1:8 cases in ADA	Tennessee State Department regulations
Teacher of blind	Pre-K-3 Intermediate Secondary	1:7 cases 1:10 cases } Assumes full-time services of teacher aide 1:12 cases	Rossmiller, Hale, and Frohreich (98:79) (based on opinions of special education directors and teachers)
Teacher of blind	District-wide	1:4 cases	Illinois State Department (53:9)
Teacher of partially seeing	District-wide	1:9 cases	Illinois State Department (53:9)
Teacher of partially sighted	District-wide	1:20 cases	NEA Department of Rural Education (55:17)
Teacher of partially sighted	District-wide	1/2:2000 pupils	Wynn (124:9)
Teacher of visually impaired	Elementary Secondary	1:7-12 cases 1:12-15 cases	Baltimore County, Md., staffing formula
Teachers of speech and/or hearing handicapped	District-wide	Speech and hearing--1:minimum monthly caseload of 70 pupils Severe speech and hearing--1:minimum monthly caseload of 25 pupils Severely hard of hearing and deaf-- 1:minimum of 8 cases in ADA 1:minimum average monthly caseload of 10	Tennessee State Department regulations
Teachers of deaf	District-wide	1-3:15 cases	Illinois State Department (53:9)
Speech correctionist	District-wide	1/2:2000 pupils	Wynn (124:9)
Speech and hearing teacher	District-wide	1:140 state units of pupils	Delaware statute
Speech and hearing therapist	District-wide	1:60-80 cases	Baltimore County, Md., staffing formula
Speech and hearing therapist	District-wide	1:2000 pupils + 1:2500 additional pupils thereafter	Ohio State Board of Education standards

(Continued)

Table 6 (Continued)

Position	Level	Recommended ratio	Source
Speech and hearing consultant	District-wide	1:100-175 teachers	AASA (4:113)(based on experience in Bucks County, Pa.)
Speech and hearing therapist	District-wide	1:2000-3000 pupils	Bonham (11:47)
Speech and hearing therapist	District-wide	1:2500 pupils	Hummel and Bonham (51:228)
Speech and hearing therapist	District-wide	1:3000 pupils	Sessions (100:174); opinions of Ohio elementary principals (92:147)
Speech therapist	District-wide	7-10:750 cases	Illinois State Department (53:9)
Speech clinician	District-wide	1:12 cases for individual work 1:100 cases for group work	Eckerson and Smith (31:77)
Speech correctionist	District-wide	1:200 cases	NEA Department of Rural Education (55:17)
Speech therapist	District-wide	1:75-100 cases	Ann Arbor, Mich., negotiation agreement
Speech correctionist	District-wide	1:65 teachers	NEA Research Division (75:16)
Physical therapist	District-wide	1:20-25 cases	Baltimore County, Md., staffing formula
Occupational therapist	District-wide	1:20-25 cases	Baltimore County, Md., staffing formula
Teacher of home and hospital bound	Elementary Secondary	1:7-10 cases 1:10-15 cases	Baltimore County, Md., staffing formula
Teacher of homebound	District-wide	1:minimum of 8 cases in ADA receiving minimum of 3 hours of instruction (2 visits) per week 2/10:2 cases in ADA (maximum)	Tennessee State Department regulations
Teacher of hospitalized	District-wide	1:minimum of 10 cases in ADA	Tennessee State Department regulations
Teacher of homebound children	District-wide	1:18 cases	NEA Department of Rural Education (55:17)
Specialist in education of homebound	District-wide	1/4:2000 pupils	Wynn (124:9)
Remedial physical education	Junior high	1 module:20 cases	La Mesa-Spring Valley School District, Calif., staffing formula

(Continued)

Table 6 (Continued)

Position	Level	Recommended ratio	Source
Teacher of remedial reading	Special education schools	1:15-20 cases	Baltimore County, Md., staffing formula

(See also Table 27 for Special Subject Teachers in special education schools)

Table 7

DISTRICT-WIDE PUPIL PERSONNEL DEPARTMENTS

Position	Recommended ratio	Source
Coordinator of pupil personnel	1 full- or part-time per district	California State Department (14:15)
Total pupil personnel specialists	1:1200 pupils (minimum) 1:900 pupils (acceptable) 1:600 pupils (preferred)	California State Department (14:17)
Directors of pupil personnel	Part-time:0.0-35.9 classroom units 1:36.0-165.9 classroom units 2:166.0-431.9 classroom units 3:432.0-697.9 classroom units + 1 additional for each 266.0 additional classroom units	Kentucky State Department allotment
Pupil personnel administrator	1 full-time:3000 pupils or 15-20 pupil personnel staff members 1 part-time:2999 pupils or less	Liddle and Kroll (62:229); Stoughton, McKenna, and Cook (107:10)
Total pupil personnel staff	1:125-135 pupils	Liddle and Kroll (62:231); Stoughton, McKenna, and Cook (107:12)
Pupil personnel administrator	1 per district	Ferguson (35:155)
Pupil personnel services employees	1:2100 pupils	Montgomery County, Md., negotiation agreement

Table 8

GUIDANCE COUNSELORS

Recommended ratio	Level	Source
1 teacher/counselor (1/4-time counselor):25-30 pupils	Middle school	Alexander (1:124)
1:250 pupils	District-wide	American School Counselors Association (7); Mortensen and Schmuller (69:64)
1:300-1:500 pupils	Grades 7-12	Bonham (11:46)
1:250-300 pupils	Junior and senior high	Conant (19:44, and 20:27)

(Continued)

Table 8 (Continued)

Recommended ratio	Level	Source
1/3-1:100-300 pupils 1-3:300-800 pupils 3-6:800-1500 pupils 6-10:1500-3000 pupils	Secondary	Douglass (30:56)
1:600 pupils 1:300 pupils	Elementary Secondary	Ferguson (35:155)
1:500 pupils 1:300 pupils	Elementary Junior and senior high	George Peabody College for Teachers (43:44-45)
1:500 in ADA	District-wide	Gilmer-Aikin Committee in Texas (110:20)
1 teacher-counselor per teaching team (1 team:90-100 pupils)	Middle school	Grooms (46:65)
1/3-2/3:101-300 pupils 2/3-1:301-600 pupils 1-2:601-1000 pupils 2-4:1001-2000 pupils	Junior high	Gruhn and Douglass (47:360)
1:371-1:1029 pupils	District-wide	Hillsinger (50:132-36)
1:300 pupils or less (1 per school as minimum)	Secondary	Hummel and Bonham (51:125)
1:400 or major fraction thereof (1 per school as minimum)	Secondary	Jackson (56:50)
1:500 pupils	Elementary	Johnson, Stefflre, and Edelfelt (58:185)
1:250-300 pupils	Middle school	Kindred (60:431)
1:600 pupils 1:250-300 pupils	Elementary Secondary	Liddle and Ferguson (61:37)
1.74:1000 pupils	District-wide	McKenna (67:36)
1:600 pupils	District-wide	NEA Department of Rural Education (55:16)
1:300 pupils	Secondary	NEA Office of Professional Development and Welfare (74:24); Wrenn (123:137)
1 per school of 500-700 1:250 pupils	Elementary Secondary	New York State Teachers Association (82:11)
1/2:less than 300 pupils 1:300 or more pupils + 1 for every additional 450 or major fraction thereof	Junior high and middle school	North Central Association (83:212-13)
1:450 pupils (determined fractionally) with no school with less than 1/2 (minimum) 1:300 pupils is exemplary	Senior high	North Central Association (83:188)
1:600 pupils 1:250 pupils	Elementary Secondary	Peters and Shertzer (88:74)
1 for every 300-400 pupils (minimum of 1 per school) 1 for every 250-350 pupils (minimum of 1 per school) 1:350 pupils	Elementary Secondary District-wide	[illegible]ling (91:120)

(Continued)

Table 8 (Continued)

Recommended ratio	Level	Source
1 guidance director or coordinator:400 pupils 1 teacher-counselor period:20-30 pupils (superior ratio) 1 teacher-counselor period:30-40 pupils is adequate	District-wide	Philadelphia Area School Study Council (90:4)
1:500 pupils	Elementary	Opinions of Ohio elementary principals (92:147)
1:250 pupils	Secondary	Opinions of Ohio secondary principals (92:147)
1:450 (optimum) 1:250 (optimum; 1:400 maximum)	Elementary Secondary	Sessions (100:174)
1:250-300 pupils	District-wide	Shertzer and Stone (101:396)
1:400 pupils	Elementary	U.S. Office of Education (114:27)
1:600 pupils	Elementary	1960 White House Conference (119:196)
1-2:500-800 in ADM 2-4:800-1200 in ADM 1-2:500-800 in ADM 2-3:800-1200 in ADM	Junior high Senior high	Wynn (124:10)
1:1250 pupils or more	District-wide	Wyoming Psychological Association and Wyoming Personnel Guidance Association (126:77)
1:350 pupils	Secondary	Connecticut State Department (22:35)
1:500 pupils	Secondary	Indiana State Department rule
1:800 pupils 1:400 pupils	Elementary Secondary	Kentucky State Department (59:21)
1 part-time counselor per school (minimum) 1/2 counselor per school (Class A standard) 1:500 pupils (Class AA standard)	Secondary	Mississippi State Department accreditation standards
1:500 pupils or major fraction 1:500 pupils or major fraction 1:450 pupils or major fraction	Elementary Junior high Senior high	New Mexico State Department accreditation standard
1:400 pupils	Junior and senior high	Ohio State Department standard
1 counselor-hour per day:75 students (1:450)	Middle and junior high school	South Dakota State Department standard
1 part-time:1-19 teachers 1:20-30 teachers 2:31-40 teachers 3:41-55 teachers 4:56-71 teachers 5:72-88 teachers 6:89-104 teachers 7:105-125 teachers 8:126-146 teachers 9:147-167 teachers 10:168-188 teachers + 1 for each additional 20 teachers	Secondary	Tennessee State Department regulations

(Continued)

Table 8 (Continued)

Recommended ratio	Level	Source
1 counselor period:70 students or major fraction thereof	District-wide	Virginia State Department accreditation standard
1:400 pupils (determined fractionally)	Secondary	Washington State Board regulation
1/2:18 or less teachers	K-6	Bakersfield, Calif., staffing formula
1:19 or more teachers	K-6	
1:18 or less teachers	Grades 7 and 8	
2:19 or more teachers	Grades 7 and 8	
1 counselor period:75 pupils	Middle and high school	Downey, Calif., regulation
0.5:800-950 pupils + 0.5 for each 150 pupils or any fraction thereof. Plus part-time counseling by principals, vice-principals, and deans = 1:400 ratio overall.	Senior high	Fresno, Calif., regulation
1 per grade in schools of 900-1150 (prorated for portions thereof)	Junior high	La Mesa-Spring Valley School District, Calif., staffing formula
2 head counselors 1 teaching period:105 pupils 16 assistant head counselors for all senior highs in district	Senior high	San Francisco, Calif., staffing formula
2 head counselors 1 teaching period:130 pupils 10-1/2 assistant head counselors for all junior highs in district	Junior high	
1:375 pupils	Junior and senior high	Brevard County, Fla., staffing formula
1:500 pupils	Secondary	Lake County, Fla., staffing formula
1:1400 pupils	K-5	Marion County, Fla., staffing formula
1:500 pupils	Grades 6-12	
1:500-749 pupils (or 1 dean) 1:750-999 pupils (+ 1 dean) 1:1000 or more pupils (+ 2 deans)	Junior high	Palm Beach County, Fla., board policy
1:250-999 pupils 2:1000 or more pupils (+ 2 deans)	Senior high	
1:500 pupils	Secondary	Volusia County, Fla., negotiation agreement
1:325 pupils	Secondary	Glenbrook Township High School District, Ill., negotiation agreement
1:300 pupils	Secondary	Rockford, Ill., negotiation agreement
1:350 pupils (goal); 1:450 for immediate implementation	District-wide	Hammond, Ind., negotiation agreement
1/2:schools of less than 700	Elementary	Baltimore County, Md., staffing formula
1:schools of 700 or more	Elementary	
1:400 pupils	Junior high	
1:400 pupils	Senior high	
1:300 pupils	Vo-tech high	
1:200 pupils	Special education schools	

(Continued)

Table 8 (Continued)

Recommended ratio	Level	Source
1:300 pupils	Secondary	Montgomery County, Md., negotiation agreement
1:300 pupils	District-wide	Arlington, Mass., negotiation agreement
1:300-350 pupils	Secondary	Ann Arbor, Mich., negotiation agreement
1:350 pupils	Secondary	Carman School District, Mich., negotiation agreement
1:350 pupils	District-wide	Hastings, Mich., negotiation agreement
1:300 pupils (optimum) 1:350 (maximum)	District-wide	Port Huron, Mich., negotiation agreement
3.28:1000 pupils 3.34:1000 pupils	Junior high Senior high	Warren, Mich., negotiation agreement
1:425 pupils 1:325 pupils	Elementary Secondary	Waterford Township, Mich., negotiation agreement
1:300 pupils	District-wide	Wayne, Mich., negotiation agreement
1:500 pupils or major fraction 1:400 pupils or major fraction	Junior high Senior high	Clark County, Nev., regulations
1:250-325 pupils 1:200-250 pupils	Junior high Senior high	Chappaqua, N.Y., negotiation agreement
1:300 pupils	Secondary	Hamburg, N.Y., negotiation agreement
1:350 pupils	District-wide	Kingston, N.Y., negotiation agreement
1:400 pupils	Secondary	Liberty, N.Y., negotiation agreement
1:400 pupils	Secondary	Middletown, N.Y., negotiation agreement
1:250 pupils	Secondary	Olean, N.Y., negotiation agreement
1:600 pupils 1:400 pupils	Elementary Secondary	Syracuse, N.Y., negotiation agreement
1:250-300 pupils	District-wide	Whitney Point, N.Y., negotiation agreement
1:350 pupils	District-wide	Cincinnati, Ohio, negotiation agreement
35 counselor periods a week: 400 pupils (1972-73)	Secondary	Columbus, Ohio, negotiation agreement
1:350 pupils	District-wide	Penn-Delco School District, Pa., negotiation agreement
1:320 pupils	Junior and senior high	Bellevue, Wash., staffing formula
1:400 pupils	Junior and senior high	Federal Way, Wash., staffing formula
1 counselor period:120 pupils	Secondary	Milwaukee, Wis., staffing formula

Table 9

SCHOOL PSYCHOLOGISTS

Recommended ratio	Level	Source
1:400-500 teachers	District-wide	AASA (4:113)
1:1000-3000 pupils	District-wide	Bonham (11:45)
1:2000 pupils	District-wide	Connecticut Advisory Pupil Personnel Committee (21:80); Ferguson (35:155)
1/6-1/3:300-800 pupils 1/3-1/2:800-1500 pupils 1/2-1:1500-3000 pupils	Secondary	Douglass (30:56)
1:5000 pupils	District-wide	George Peabody College for Teachers (43:44)
1/4:301-600 pupils 1/2:601-1000 pupils 1:1001-2000 pupils	Junior high	Gruhn and Douglass (47:360)
1 to every 300 third grade pupils = 25 percent of the total staff. For district of 13,500, 1 director, 10 interns, and following psychologists: 4-evaluation 3-academically talented 3-mentally and physically handicapped 1-pure research 1-mental health 1-behavior disorders 1-learning disability	District-wide	Higgins (49:42)
1:2500 pupils	District-wide	Hummel and Bonham (51:158); Sessions (100:174)
1:3000 pupils (narrow range of services)	District-wide	Johnson, Stefflre, and Edelfelt (58:149)
1:1000 pupils	District-wide	Liddle and Ferguson (61:59)
1.07:1000 pupils (applies to all psychological services--psychiatrists, psychologists, psychometrists)	District-wide	McKenna (67:36)
1:3000 pupils	District-wide	NEA Department of Rural Education (55:16)
1:1600 pupils + part-time at rate of 1:2400	District-wide	NEA Research Division (75:16)
1:1500-1800 pupils (smaller ratio in disadvantaged areas)	District-wide	New York State Teachers Association (82:12)
1:5000 pupils	District-wide	Philadelphia Area School Study Council (90:5)
1:2500 pupils	Elementary	Opinions of Ohio elementary principals (92:147)
1 mental hygienist:5000 pupils	District-wide	Reeder (94:439)
1:1500 pupils	Elementary	Stoops and Rafferty (106:298)

(Continued)

Table 9 (Continued)

Recommended ratio	Level	Source
1:5000 pupils For district of 50,000 pupils: 1 director 10 general psychologists 1 testing specialist 1 research consultant 1 clinical specialist 1 psychologist assigned to special projects	District-wide	Tindall (111:8)
1:6000-7500 pupils	District-wide	Wall (116:124)
1:1000-1500 pupils 1:500-600 pupils	Elementary Secondary	1930 White House Conference (118:179)
1 psychological and/or psychiatric specialist:2000 pupils	District-wide	1960 White House Conference (119:196)
1/2:2000 pupils	District-wide	Wynn (124:9)
1:1500 pupils	District-wide	Connecticut State Department (22:35)
1:each 150 state units of pupils (200 beginning July 1, 1972)	District-wide	Delaware statute
1:5000 pupils; 1 part-time if less than 5000 pupils (desirable)	District-wide	Georgia State Department accreditation standard
1:5000 pupils	District-wide	Illinois State Department guideline (53:9)
1:3000 pupils	District-wide	Indiana State Department rule
1:3000 pupils + 1 to each additional 5000	District-wide	Ohio State Board of Education standard
1:every school with more than 3000 pupils	Secondary	Huntington Beach Union High School District, Calif., staffing formula
1:2000 pupils	Secondary	Rockford, Ill., negotiation agreement
1:2500 pupils	District-wide	Cincinnati, Ohio, negotiation agreement

Table 10

PSYCHOMETRISTS AND OTHER TESTING PERSONNEL

Position	Recommended ratio	Source
Psychometrist	1:100-200 teachers	AASA (4:113)
Pupil appraisal staff members	1:10,000 pupils or more (minimum)	Bonham (11:48)
Director of testing and research (secondary school)	1/6-1/3:300-800 pupils 1/3-1/2:800-1500 pupils 1:1500-3000 pupils	Douglass (30:56)
Psychometrist	1 part-time:each psychologist, or services of complete testing bureau at outside agency	Philadelphia Area School Study Council (90:5)

(Continued)

Table 10 (Continued)

Position	Recommended ratio	Source
Psychometrist	1:7500 pupils (desirable)	Georgia State Department accreditation
Pupil appraisal staff members	1:10,000 pupils + 1 for each additional 15,000 pupils	Ohio State Department (85:9)
Testing personnel	0.2 for each junior and senior high school	Oakland, Calif., staffing formula

Table 11

SCHOOL SOCIAL WORKERS AND VISITING TEACHERS

Recommended ratio	Source
1:1000 to 1:3000 pupils	Bonham (11:46)
1:2000 pupils	Ferguson (35:155)
1:5000 pupils	George Peabody College for Teachers (43:45)
1:3000 pupils	Hummel and Bonham (51:195)
1:every 2 or 3 elementary schools 1:every high school of 2500 pupils	Johnson, Stefflre, and Edelfelt (58:174)
1:1000-1500 pupils	Liddle and Ferguson (61:37)
1:2400 pupils	NEA Research Division (75:16)
1:1000-2000 pupils	New York State Teachers Association (82:12)
1:1000 pupils	Pearman and Burrows (87:4)
2:each psychologist (superior)	Philadelphia Area School Study Council (90:5)
1:500 pupils	1930 White House Conference (118:179)
1:1500 pupils	Connecticut State Department (22:35)
1:250 state units of pupils	Delaware statute
1:5000 pupils or major fraction thereof (desirable)	Georgia State Department accreditation standard
1:4000 pupils	Illinois State Department guideline (53:9)
1:2500 pupils	Michigan state law
1:3000 pupils	Ohio State Department (85:8)
1:1800 secondary pupils	Rockford, Ill., negotiation agreement
1:1800 pupils or major fraction thereof	Ann Arbor, Mich., negotiation agreement
1:600 elementary pupils (goal)	Syracuse, N.Y., negotiation agreement
1:1500 pupils (goal)	Cincinnati, Ohio, negotiation agreement

Table 12

ATTENDANCE PERSONNEL

Recommended ratio	Source
1:5000 pupils (+ 1 in child accounting:10,000 pupils)	Bonham (11:47)
1/5:300-800 secondary pupils 2/5-4/5:800-1500 secondary pupils 1-2:1500-3000 secondary pupils	Douglass (30:56)
1:6000 pupils	NEA Department of Rural Education (55:16)
1:2000 pupils	New York State Teachers Association (82:12)
1 full-time director for system with 1500-2000 pupils + 1 visiting teacher for each 1500-2000	Wynn (124:9)
1 attendance counselor per school	Ohio State Department (85:9)
1/2:30-49 teachers (maximum) 1:50 or more teachers (maximum)	Tennessee State Department regulation

Table 13

HEALTH SERVICES DEPARTMENTS

Position	Recommended ratio	Source
Supervisor of health and nutrition	1 per school system	NEA Research Division (75:16)
All health specialists (doctors, nurses, dental)	1.85:1000 pupils	McKenna (67:36)
Health services personnel	1:2500 pupils	Sessions (100:174)

Table 14

SCHOOL NURSES

Recommended ratio	Source	Remarks
1:40-50 teachers	AASA (4:113)	Based on experience in Bucks County, Pa.
1 on-call:0-199 junior high pupils 1/2:200-499 junior high pupils 1:500-999 junior high pupils	Baugham (9:56)	Based on study of junior high schools in Illinois
1:1000-3000 pupils	Bonham (11:46)	
1/5-2/5:100-300 secondary pupils 2/5-1:300-800 secondary pupils 1-2:800-1500 secondary pupils 2-5:1500-3000 secondary pupils	Douglass (30:56)	

(Continued)

Table 14 (Continued)

Recommended ratio	Source	Remarks
1:2000 pupils	Ferguson (35:155); NEA Department of Rural Education (55:16); Hummel and Bonham (51:211); Ohio State Department (84:7)	
1 per school	George Peabody College for Teachers (43:45)	Based on survey of Duval County, Fla.
1/4-1/2:101-300 junior high pupils 1/2-1:301-600 junior high pupils 1-1-1/2:601-1000 junior high pupils 1-1/2-2:1001-2000 junior high pupils	Gruhn and Douglass (47:360)	
1:1500 elementary pupils 1:2000-2500 secondary pupils	Haag (48:104)	
1:700-1000 middle school pupils	Kindred (60:431)	
1:1200 pupils (maximum)	Liddle and Ferguson (61:37); NEA Research Division (75:16)	
1:500 pupils	New York State Teachers Association (82:11); Whitney Point, N.Y., negotiation agreement	
1 full- or part-time per senior high school	North Central Association (83:188)	
1:800 pupils (adequate) 1 per school with enrollment up to 500 + additional nurses in larger schools at ratio of 1:800 pupils (superior)	Philadelphia Area School Study Council (90:7)	Plus part-time secretarial help
1:2500 elementary pupils	Opinions of Ohio elementary principals (92:147)	
1 nurse or visiting teacher per school of 500-600 3:5000 pupils	Reeder (94:385, 439)	
1:1000 elementary pupils	Stoops and Rafferty (106:29)	Higher ratio possible for secondary pupils
1:2000 pupils 1 supervisor of nurses:8-10 nurses	1930 White House Conference (118:179)	
1:1183 pupils	Wolf and Pritham (121:141)	Average recommended statewide nurse-pupil ratio
1/2-1:500-800 secondary pupils in ADM 1:800-1200 secondary pupils in ADM 1-1/2-2:2000 pupils enrolled system-wide	Wynn (124:10)	
1:1000 pupils	Indiana State Department rule; Rockford, Ill., negotiation agreement	
1:1200 pupils	New Mexico State Department accreditation standard	Ratio may be higher where health aides are used

(Continued)

Table 14 (Continued)

Recommended ratio	Source	Remarks
1:1350 pupils	Tucson, Ariz., staffing formula	
1 day per week per elementary school 2 days per week per middle school 1 full-time per high school	Downey, Calif., regulation	
1 per secondary school	Huntington Beach Union High School District, Calif., staffing formula	Adjustments for varying enrollments made by amounts of classified school clerk (vocational nurse) time made available
1 per each junior and senior high school	Oakland, Calif., staffing formula	
1 day per week for elementary schools with 1-450 pupils 2 days per week for elementary schools with 450-775 pupils 3 days per week for elementary schools with 775-1100 pupils 4 days per week for elementary schools with 1100-1400 pupils 5 days per week for elementary schools with 1400-1600 pupils	San Diego, Calif., staffing formula	In elementary low economic and handicapped schools: 1 day:0-400 pupils 2 days:400-600 pupils 3 days:600-900 pupils 4 days:900-1100 pupils 5 days:1100-1250 pupils
1 hour of nursing service per student per year	San Jose, Calif., staffing formula	Or health clerk equivalent
1:2800 pupils	Ann Arbor, Mich., negotiation agreement	
1:2 elementary schools	Minneapolis, Minn., staffing formula	
1:900 pupils	Liberty, N.Y., negotiation agreement	Goal

Table 15

SCHOOL PHYSICIANS

Recommended ratio	Level	Source
1/6-1/2:300-800 pupils 1/2-1:800-1500 pupils 1:1500-3000 pupils	Secondary	Douglass (30:56)
1/4:301-1000 pupils 1/2:1001-2000 pupils	Junior high	Gruhn and Douglass (47:360)
Estimate of number of health examinations to be made, including referrals, x 15 minutes + estimate of time needed in other health service activities = number of minutes of physician time which must be provided	District-wide	NEA and AMA (79:319-20)
1:2400 pupils	District-wide	NEA Research Division (75:16)
1:4000 pupils	Elementary	Stoops and Rafferty (106:298)
1/2:2000 pupils	District-wide	Wynn (124:9)

Table 16

DENTAL HEALTH PERSONNEL

Position	Recommended ratio	Source
Dentist	1 part-time:5000 pupils	Reeder (94:439)
Oral hygienist	1:5000 pupils	Reeder (94:439)
Dentist	1/6-1/2:300-800 secondary pupils 1/2-1:800-1500 secondary pupils 1-2:1500-3000 secondary pupils	Douglass (30:56)
Dental hygienist	1:2000 pupils	NEA Department of Rural Education (55:16)
Dental hygienist	1:15,000 elementary pupils	Stoops and Rafferty (106:298)
Dental hygienist Dentist	1-1-1/2:2000 pupils 1/2:2000 pupils	Wynn (124:9)
Oral hygienist	1:1600 pupils	NEA Research Division (75:16)
Dental health teacher	1:1500 pupils	New York State Teachers Association (82:12)

Table 17

SCHOOL BUILDING STAFFING RATIOS

Source	Recommended ratio or staff composition
Conant (20:34-35)	In junior high schools, 50 professional staff members to 1000 pupils, as a minimum. A better ratio in the junior high would be 59 professional staff members to 1000 pupils. In the senior high, a ratio of 52 professional staff members to 1000 pupils is recommended.
Council for Administrative Leadership (25:26)	Based on a study of the junior high schools in New York State, recommends the following optimum staffing pattern for a junior high school of 700-1000 pupils: 1 principal 2 assistant principals 1 school nurse 1 part- or full-time psychologist 3 guidance counselors 1 part- or full-time coordinator of student activities 1 part- or full-time coordinator of instructional materials 1 reading consultant 1 speech correctionist
Southern Association of Colleges and Secondary Schools (103:72-84)	The Association recommends a junior high school of no more than 720 pupils, with the following staff: 1 full-time principal 1 curriculum or administrative assistant 1 full-time materials consultant + services of a full-time clerk 1 full-time guidance counselor 1 secretary + 1 stenographer 1 full-time nurse 25-35 teachers 6 janitors (1:12 classrooms or equivalent) 1 lunchroom manager + necessary personnel

(Continued)

Table 17 (Continued)

Douglass (30:56)

Douglass suggests the following staffing patterns for secondary schools of various sizes:

Position	Schools of 1500-3000	Schools of 800-1500	Schools of 300-800	Schools of 100-300	Schools of less than 100
Principal	1	1	1/2-1	1/3-2/3	...
Vice principal or coordinator of instruction	1	1/2-3/4	1/3-1/2	...	...
Vice principal or director of athletics	1	1/2-3/4	1/3-1/2	...	...
Vice principal or director of guidance	1	1/2-2/3	1/6-1/3	...	...
Psychologist	1/2-1	1/3-1/2	1/6-1/3	...	...
Counselors	6-10	3-6	1-3	1/3-1	...
Director of health and P.E.	1/2-1	1/4-1/2	1/6-1/3	...	...
Librarian	2-4	1-2	1/2-1	1/3-1/2	1/6
Director of athletics	1/2-1	1/3-1/2	1/6-1/3	1/6	...
Heads of departments or special supervisors	4-6	2-3	1-2	1/2-1	...
Attendance supervisor	1-2	2/5-4/5	1/5	...	...
Physician	1	1/2-1	1/6-1/2	...	...
Nurses	2-5	1-2	2/5-1	1/5-2/5	...
Dentist	1-2	1/2-1	1/6-1/2	...	...
Director of testing and research	1	1/3-1/2	1/6-1/3	...	...
Office secretary and clerks	5-8	3-5	1-3	1/2-1	...
Director of cafeteria	1	1	1/2-1	1/3-1/2	...

Gruhn and Douglass (47:360)

The recommended size of a junior high school staff, including all professionals and secretarial help, varies by size of school, as follows:

Position	Schools of 101-300	Schools of 301-600	Schools of 601-1000	Schools of 1001-2000
Principal	1/3-2/3	2/3-1	1	1
Assistant principal	...	1/4-1/2	1/2-1	1-2
Counselors	1/3-2/3	2/3-1	1-2	2-4
Librarian	1/3-2/3	1	1-2	2-3
School nurse	1/4-1/2	1/2-1	1-1½	1½-2
School physician	...	1/4	1/4	1/2
Psychologist	...	1/4	1/2	1
Attendance officer, office clerks, secretaries	1/2-1	1-2	1½-3	3-5
Supervisors and curriculum director	1/2	1	2	3-6
Classroom teachers	5-12	12-24	24-40	40-80
Totals	7-16	17-32	33-53	55-105

Florida statute

1 "instructional unit" for "special teacher services" is allowed for each 8 instructional units. "Special teacher service units" may include such personnel as principal, assistant principals, librarians, special subject teachers, counselors, deans, etc.

(Continued)

Table 17 (Continued)

Source	Recommended ratio or staff composition
McLure and Pence (68:46, 78)	Based on study of innovative elementary (10), middle (11), and high schools (9), reports following average staffing ratios:

Average number of:	Elementary schools	Middle schools	High schools
Pupils	697	1170	1697
Teachers	27.4	51.3	76.7
Nonteaching professionals	2.2	6.9	9.3
Pupils per teacher	25.4	22.8	22.1
Pupils per academic staff member	23.5	20.1	19.7
Teachers per academic staff member for nonteaching functions	12.5	7.4	8.2
Teachers per teacher aide	8.0	N/A	N/A

NASSP commission on staff utilization (113:92-93)

The Commission on the Experimental Study of the Utilization of Staff in the Secondary School in 1957 recommended that the staff for 1000 students should consist of the following:

12 teacher specialists
12 general teachers
12 instructional assistants (preprofessionals), or the equivalent
6 clerical assistants
3 general aides
suitable number of pupil personnel specialists

Illinois Task Force on Education (54:35)

Recommended a ratio of 60 professional staff members to 1000 pupils in large secondary schools (over 1500 pupils). For smaller secondary schools, the ratio should increase inversely to 80 professional staff members to 1000 pupils, so that in schools with only 200 pupils, 16 professional staff members are employed.

Ohio statute

35 classroom teachers per 1000 pupils + 5 percent of this number (teachers) for counselors, librarians, visiting teachers, and school nurses.

Grossmont Union High School District, Calif., guidelines

In the Grossmont Union High School District, the personnel units for a school are determined by the application of a factor or constant, the size of which ranges from 20-23. The variation in the constant reflects the variation in program from school to school. For example, if a school has 20 as its constant factor and its anticipated enrollment for the year in question is 2000, one would calculate that the school would be awarded 100 personnel units by dividing 20 into 2000.

By definition, a personnel unit is a unit the dollar equivalent of which is the average cost of a teacher in the district for the year in question. The cost of other personnel is calculated against this benchmark amount. For example, a clerk may cost an average of $5500, which is equivalent to 1/2 or .5 personnel unit since the average teacher salary was designated as $11,000. The cost of a teacher aide may be calculated to be 1/3 of $11,000 or 1/3 of a personnel unit. If a principal is awarded a personnel unit, he has the option in this example of using it to employ one teacher, or two clerks, or three teacher aides or some combination thereof. In this way, a principal can equate costs of the various positions employed in a school and determine what "mix" of persons would provide the necessary services.

The first year a school enters this program, it determines its constant factor, based on present staff, by adding the unit value of present staffing and dividing the enrollment by that figure. To enrich a program thereafter, the constant factor is lowered, thus providing additional staff positions.

Buena Vista School District, Mich., negotiation agreement

Ratio of certificated staff (except administrators) to pupils, 1:29

(Continued)

Table 17 (Continued)

Source	Recommended ratio or staff composition
Washington State Board of Education rules and regulations	For junior-senior high schools with enrollments under 150 pupils (grades 7-12), the following minimum personnel are required: 1/2 administrator 8 teachers 1/2 librarian 1/2 counselor 4/7 clerk
Kern High School District, Calif., staffing formula	The formula for determining the total certificated staff (teaching and non-teaching) in the district's high schools and the formula for determining the number of administrative periods (principals, assistant principals, deans, counselors, attendance and testing personnel, and curriculum coordinators), are based on pupil enrollment, as follows:

Enrollment interval	Total certificated staff: Pupils per staff member	Total certificated staff: Ratio change per 100	Administrative periods: Pupils per administrative period	Administrative periods: Ratio change per 100
100 - 200	14.1 - 15.3	1.20	18.0 - 19.9	1.90
200 - 300	15.3 - 16.4	1.10	19.9 - 21.4	1.50
300 - 600	16.4 - 18.7	.77	21.4 - 24.9	1.17
600 - 1000	18.7 - 20.7	.50	24.9 - 28.5	.90
1000 - 1500	20.7 - 22.5	.36	28.5 - 31.9	.68
1500 - 2000	22.5 - 23.8	.26	31.9 - 34.5	.52
2000 - 3000	23.8 - 25.1	.13	34.5 - 38.7	.42
3000 - 4000	25.1 - 25.9	.08	38.7 - 42.3	.36
4000 - 5000	25.9 - 26.4	.05	42.3 - 45.8	.35

Ocean View Elementary School District, Calif., staffing formula	Each school is allocated FTE staff units, based on enrollment. A staff unit is defined as a personnel item, either certificated or classified, with the prior year's average salary on the teachers' certificated schedule being the equivalent of one unit. Units are assigned as follows: 1 staff unit per 29 pupils in kindergarten 1 staff unit per 28 pupils in grades 1-3 1 staff unit per 29 pupils in grades 4-8 Special education teachers are allocated separately.
Chelsea, Mich., negotiation agreement	Ratio of total professional staff in a secondary school building to pupils will be 1:27
Clarenceville School District, Mich., negotiation agreement	Ratio of professional staff (except administrators) to pupils, 35:1000
Hancock, Mich., and Menominee, Mich., negotiation agreements	Ratio of total professional staff in any school building to pupils will be 1:27
Cleveland Heights-University Heights School District, Ohio, negotiation agreement	Ratio of certificated staff (except administrators) to pupils, 1:25

(Continued)

Table 17 (Continued)

Source	Recommended ratio or staff composition
Lincoln, Nebr., staffing formula	An allocation of staffing points is assigned each building on the basis of its projected fall enrollment. For the purpose of allocation, kindergarten pupils are counted as one-half and educable mentally retarded students as double. Buildings with less than 600 pupils are allocated an additional point for each multiple of 50 or portion of 50 pupils. In allocating staff, principals may request staff whose total allocation points equal the school's enrollment. The intent is to keep total staffing within the present general range but also to provide principals with greater flexibility in choice and assignment of staff. All staff assigned to a building are counted against the allotment according to the following schedule, except for nurses, staff for handicapped other than EMH, and staff for interscholastic athletics and driver education. Staff and allocation points include, but are not limited to, the following:

Position	Allocation points
Principal	30
Assistant administrator	27
Coordinator (an instructional leadership role involving double stipend)	26
Team leader (an instructional leadership role involving single stipend)	23
Teacher (anyone paid on the teacher schedule, including librarians, counselors, etc.)	20
Associate teacher (half-time professional limited to first two steps on salary schedule)	8
Instructional aide (working 6 hours per day, includes accompanists and lab assistants)	6
Clerk (8 hours per day)	8
Optional period assignments	3

Harlandale School District, Texas staffing formula

The allocation of personnel is determined by the enrollment of the school, based on the following formulas for determination of units earned under the state minimum foundation program:

$$\text{Classroom teacher units} = \frac{\text{ADA}}{25}$$

$$\text{Special service units} = \frac{\text{Classroom teacher units}}{20}$$

$$\text{Counselors and supervisors} = \frac{\text{Classroom teacher units} - 40}{50} + 1$$

$$\text{Full-time principals} = \frac{\text{Classroom teacher units} - 20}{30} + 1$$

Part-time principals (and assistants) = 1 part-time principal per full-time principal (or assistant)

$$\text{Teacher aides} = \frac{\text{Classroom teacher units}}{20}$$

Special education aides = 1 for each 5 instructional units approved

Racine, Wis., staffing formula

To determine staffing of elementary schools for positions other than the principal, office secretary, instrumental music teacher, remedial speech teacher, and teachers of special education classes, values are assigned to staff members as follows:

1.0 teachers, librarians, special subject teachers, administrative assistants
0.5 interns
0.4 auxiliary aides and instructional secretaries

(Continued)

Table 17 (Continued)

Source	Recommended ratio or staff composition
Racine, Wis. (Continued)	The ratios exclude staff hired with federal funds or funds from other than local sources. In determining staff allotment, all decimal fractions are rounded to the nearest half. The ratios for elementary schools are as follows: Outer-city and county schools -- 1:26.8 Inner city schools -- 1:19 The building principal, conferring with his professional staff, develops a staffing plan, which is subject to the approval of the superintendent and instructional division staff.

Table 18

SCHOOL PRINCIPALS

Level	Recommended ratio	Source
All levels	1 full-time:300 in ADA	Gilmer-Aikin Committee in Texas (110:20)
All levels	1 full-time:250 pupils	NEA Office of Professional Development and Welfare (74:32)
All levels	1/2-time in supervisory duties:20 teachers	Philadelphia Area School Study Council (90:3)
All levels	1 full-time:building or combination of buildings having 15 or more units of pupils (1 unit of pupils is 50 kindergarten, 25 in grades 1-6, or 20 in grades 7-12).	Delaware statute
All levels	1/2:250-349 pupils 3/4:350-499 pupils 1:500 pupils + additional administrative/supervisory assistant prorated for each additional 500 pupils	Indiana State Department rule
All levels	1 full-time:20 or more teachers 1 half-time:10 or less teachers	South Dakota accreditation standards
Elementary	1 full-time:12 or more teachers	Neagley and Evans (80:55)
Elementary	1/2-time:less than 12 teachers 1:12 or more teachers + additional administrative help over 25 teachers	Southern Association of Colleges and Schools (102:24)
Elementary	1/2-1:200-350 pupils 1:350-1200 pupils	Wynn (124:10)
Elementary	At least a part-time principal in addition to the teachers in schools of 8 or more teachers.	Indiana State Department rule
Elementary	1:12 or more regular teachers	Mississippi State Department accreditation standards
Elementary	1:12 or more certificated staff 1/2:6-11 certificated staff Less than 1/2 time for 5 or less certificated staff	New Mexico State Department accreditation standards

(Continued)

Table 18 (Continued)

Level	Recommended ratio	Source
Elementary	1:400 or more pupils Part-time under 400 pupils	Downey, Calif., regulations
Elementary	1/2:5-7 teachers 1:8 or more teachers	Clark County, Nev., regulation
Junior high	1:200 or more pupils	Baugham (9:56)
Junior high	1/3-2/3:101-300 pupils 2/3-1:301-600 pupils 1:601 or more pupils	Gruhn and Douglass (47:360)
Junior high	1/2:less than 300 pupils 1:300 or more pupils	New Mexico State Department accreditation standard
Junior and senior high	1:500 or more in ADM	Wynn (124:10)
Junior and senior high	1 part-time spending 3 hours per day for schools of fewer than 200 pupils; in schools with 200 or more pupils, 5 hours per day (minimum)	Kansas State Department accreditation standard
Secondary	1/3-2/3:100-300 pupils 1/2-1:300-800 pupils 1:800-3000 pupils	Douglass (30:56)
Secondary	1/2:249 or less pupils 1:250 or more pupils	North Central Association (83:179); New Mexico State Department accreditation standard
Secondary	Schools with fewer than 300 pupils, administrative time assigned in ratio of enrollment to 300	Washington State Board of Education regulation

Table 19

ASSISTANT (VICE, ASSOCIATE) PRINCIPALS

Level	Recommended ratio	Source
All levels	1:500 pupils	NEA Office of Professional Development and Welfare (74:32)
All levels	1:600 pupils	Neagley and Evans (80:36)
All levels	1:each multiple of 20 pupils units beyond the first 15	Delaware statute
All levels	1:750-1499 pupils 2:1500 or more pupils	Georgia State Department accreditation standard
All levels	1:each 500 pupils after first 500	Indiana State Department rule
Elementary	1:more than 25 teachers	Neagley and Evans (80:55)
Elementary	1 part-time:500-800 pupils 1 full-time:800-1200 pupils	Wynn (124:10)
Elementary	1:20 or more classified personnel + 1 assistant to the principal for 20 or more teachers	New Mexico State Department accreditation standards

(Continued)

Table 19 (Continued)

Level	Recommended ratio	Source
Elementary	1/2:900-1199 pupils 1:1200-1800 pupils	Long Beach, Calif., staffing formula
Elementary	1:1000 or more pupils	San Diego, Calif., staffing formula
Elementary	1:700 or more pupils	San Francisco, Calif., staffing formula
Elementary (K-5)	1 part-time:450 pupils and/or 15 teachers 1 full-time:650 pupils and/or 22 teachers	San Mateo City School District, Calif., regulation
Elementary	1:1000 or more pupils	Denver, Colo., staffing formula
Elementary	1:800 or more pupils	Dade County, Fla., staffing formula
Elementary	1/2:700-750 pupils 1:751-1000 pupils 2:1000 or more pupils	Volusia County, Fla., staffing formula
Elementary	1:850 or more pupils	Wichita, Kansas, staffing formula
Elementary	1:700 or more pupils 1 administrative assistant for schools with under 700 pupils	Baltimore County, Md., staffing formula
Elementary	1:600 or more pupils	Montgomery County, Md., staffing formula
Elementary	1:1000 or more pupils	Minneapolis, Minn., staffing formula
Elementary	1:30 or more teachers	Jackson, Miss., staffing formula
Elementary	1:850 or more pupils	Cincinnati, Ohio, staffing formula
Elementary	1:1000 or more pupils	Toledo, Ohio, staffing formula
Elementary	1:1000 or more pupils	Tulsa, Okla., staffing formula
Elementary	1:1000 or more pupils	Ft. Worth, Texas, staffing formula
Middle school	1:600-750 pupils + additional part-time vice principal as number approaches 1000 pupils	Kindred (60:431)
Middle school	1 per school	Downey, Calif., regulation
Middle school	1:less than 750 pupils 2:750 pupils and/or 25 teachers	San Mateo City School District, Calif., regulation
Middle school	1:500-800 pupils + 1 additional for each 500 pupils	Marion County, Fla., staffing formula
Junior high	1 part-time:200 pupils 1 half-time:200-499 pupils 1 full-time:500-999 pupils	Baugham (9:56)
Junior high	1:750 pupils ("with predominantly administrative duties")	Conant (20:37)
Junior high	2 "assistants":700-1000 pupils	Council for Administrative Leadership (25:26)
Junior high	1 full-time "administrator" for each 15-20 professional staff members, exclusive of the principal	Council on Junior High School Administration (27:331)

(Continued)

Table 19 (Continued)

Level	Recommended ratio	Source
Junior high	1/4-1/2:301-600 pupils 1/2-1:601-1000 pupils 1-2:1001-2000 pupils	Gruhn and Douglass (47:360)
Junior high	1:500-1000 pupils + clerical assistance	New Mexico State Department accreditation standard
Junior high	1 per school	Policies of Tucson, Ariz., and La Mesa-Spring Valley School District, Calif.
Junior high	2 per school	Oakland, Calif., and Baltimore County, Md., staffing formulas
Junior high	2:1600 or fewer pupils 3:over 1600 pupils	San Jose, Calif., staffing formula
Junior high	1:600 or more pupils + 1 additional for each 25 percent in excess of normal building capacity	Clark County, Nev., regulation
Junior high	1 per school	Bellevue, Wash., staffing formula
Junior or senior high	1:500-800 in ADM 1-2:800-1200 in ADM	Wynn (124:10)
Junior and senior high	3 per each school	San Francisco, Calif., staffing formula
Junior and senior high	Enrollment ÷ 600 + 1/2 = number of principals and assistants	Federal Way, Wash., staffing formula
Secondary	1 each vice-principal or coordinator of instruction, vice-principal or coordinator of activities, vice-principal or director of guidance in schools of 1500-3000 pupils; in schools of 800-1500 pupils, 1/2-3/4, 1/2-3/4, and 1/2-2/3, respectively; in schools of 300-800 pupils, 1/3-1/2, 1/3-1/2 and 1/6-1/3, respectively.	Douglass (30:56)
Secondary	1:1250 pupils	George Peabody College for Teachers (43:37)
Secondary	In schools over 600 pupils, 1:each additional 600 pupils or 25 teachers, or major fraction thereof	Neagley and Evans (80:55)
Secondary	1:1000 pupils	Opinions of Ohio secondary principals (92:147)
Secondary	1:600 pupils	Virginia State Department accreditation standard
Secondary	1:501-1500 pupils 2:1501-2500 pupils 3:2501-3500 pupils 4:4000 or more pupils	Huntington Beach Union High School District, Calif., staffing formula
Secondary	1:500-899 pupils 2:900-1799 pupils 3:1800 or more pupils	Montgomery County, Md., staffing formula
Senior high	1/2:500 or more pupils (minimum) 1:1000 pupils + 1 for each additional 1000 pupils or major fraction	North Central Association (82:179)

(Continued)

Table 19 (Continued)

Level	Recommended ratio	Source
Senior high	1:500-1000 pupils + 1 for each additional 1000 pupils or major fraction	New Mexico State Department accreditation standards
Senior high	2 per school	Tucson, Ariz., staffing formula
Senior high	3 per school	Oakland, Calif., Downey, Calif., and Baltimore County, Md., staffing formulas
Senior high	3 per school	San Jose, Calif., staffing formula
Senior high	1 per school + 1 additional in schools with over 1000 pupils	Lake County, Fla., staffing formula
Senior high	1:500-800 pupils + 1 for each additional 500 pupils	Marion County, Fla., staffing formula
Senior high	1:250-999 pupils (or 1 dean) 1:1000 or more pupils (+ 2 deans)	Palm Beach County, Fla., board policy
Senior high	1/2:less than 500 pupils 1:501-1000 pupils 2:1001-1500 pupils 1 associate + 2 assistant:1501-2000 pupils (OR 2 associate + 1 assistant) 2 associate + 2 assistant:2001-2500 pupils 2 associate + 3 assistant:2501-3000 pupils	Volusia County, Fla., staffing formula
Senior high	1:500-1199 pupils 2:1200-1999 pupils 3:2000 pupils	Clark County, Nev., regulation
Senior high	2 per school	Bellevue, Wash., staffing formula

Table 20

OTHER PROFESSIONAL AND SUBPROFESSIONAL ADMINISTRATORS AND SUPERVISORS IN SECONDARY SCHOOLS

Position	Recommended ratio	Source
Dean of students	1 per junior high school 2 per senior high school	Brevard County, Fla., staffing formula
Dean of students	1:400-600 junior high school pupils (in lieu of assistant principal) 1:400-600 senior high school pupils + an assistant principal	Fresno, Calif., administrative rule
Dean of boys	1:600 or more junior high school pupils (in lieu of assistant principal) 1:600 or more senior high school pupils + an assistant principal	
Dean of girls	1:600 or more junior high school pupils (in lieu of assistant principal) 1:600 or more senior high school pupils + an assistant principal	

(Continued)

Table 20 (Continued)

Position	Recommended ratio	Source
Deans - junior high	1:500-749 pupils (or 1 counselor) 1:750-999 pupils (+ 1 counselor) 2:1000 or more pupils (+ 1 counselor)	Palm Beach County, Fla., board policy
senior high	1:250-999 pupils (or 1 assistant principal) 2:1000 or more pupils (+ 1 assistant principal)	
Sub-professional assistants (registrars, activities directors, business managers)	1/2:501-1000 pupils 1:1001-1500 pupils 2:1501-2500 pupils 3:2501-3000 pupils	Volusia County, Fla., staffing formula
Department heads	1 additional teacher per junior high school 2 additional teachers per senior high school	San Jose, Calif., staffing formula
Department chairmen	1:40 junior high teachers 1:35 senior or vocational high school teachers	Baltimore County, Md., staffing formula
Heads of departments or special supervisors	1/2-1:100-300 pupils 1-2:300-800 pupils 2-3:800-1500 pupils 4-6:1500-3000 pupils	Douglass (30:56)
Director of athletics	1/6:100-300 pupils 1/6-1/3:300-800 pupils 1/3-1/2:800-1500 pupils 1/2-1:1500-3000 pupils	
Department head (senior high)	1 period per school day of released time	San Francisco, Calif., staffing formula
School publications (senior high)	2 periods per school day of released time	
Student supervision	1 full-time teacher per secondary school	
Social chairmanship (junior high)	1 half-time teacher assigned	
Athletics coordinator	1 per senior high school	Columbus, Ohio, 1972-73 goal
Coaching director	1 full-time per senior high school	Oakland, Calif., staffing formula
School coordinator of activities	2 periods:501-1000 pupils 3 periods:1001-1500 pupils 4 periods:1501-2000 pupils Full-time:2001 or more pupils	Huntington Beach Union High School District, Calif., staffing formula
Activities coordinator	1 per senior high school	Columbus, Ohio, 1972-73 goal; Oakland, Calif., staffing formula
Activities coordinator (senior high)	1 per school	Bellevue, Wash., staffing formula
Teachers on special assignment	1:850-999 pupils	San Diego, Calif., staffing formula

Table 21

DISTRICT-WIDE TEACHER-PUPIL RATIOS

Ratio	Source
1:25	1967 platform of the Association of Classroom Teachers (NEA)
1:25	1963 resolution of the Association for Supervision and Curriculum Development
40:1000	Castetter, Griffiths, and Felker (16:30)
1:25 in ADA	Gilmer-Aikin Committee in Texas (110:20)
1:24 in ADA	Texas Governor's Committee (110:20)
50:1000	McKenna (67:50)
55-60:1000	New York State Teachers Association (82:3)
Schools of 120-199 in ADA--Grade 1, 1:23; 2-12, 1:25. Schools of 200-299 in ADA--Grade 1, 1:24; 2-12, 1:26. Schools of 300 or more in ADA--Grade 1, 1:25; 2-12, 1:27.	Florida statute
1:30	Georgia State Department standard
1:27 in ADA	Kentucky State Department allotment
1:25	New Mexico State Department accreditation standard
1:25 (maximum)	Virginia State Department standard
1:30 (maximum)	Washington State Department requirement
1:25	New Fairfield, Conn., negotiation agreement
1:30	New Haven, Conn., negotiation agreement
1:25-28	Montgomery County, Md., staffing formula
40:1000	Bridgewater, Mass., negotiation agreement
1:25	Marshfield, Mass., negotiation agreement
1:25	Northhampton, Mass., negotiation agreement
1:28	Carson City-Crystal Area School District, Mich., negotiation agreement
1:30	Coleman, Mich., negotiation agreement
1:30	East China Township, Mich., negotiation agreement
33.5:1000	Greenville, Mich., negotiation agreement
1:25	Haslett, Mich., negotiation agreement
1:25	Hastings, Mich., negotiation agreement
45:1000	Highland Park, Mich., negotiation agreement
1:30	Lamphere, Mich., negotiation agreement
1:30	Mason Consolidated School District, Mich., negotiation agreement

(Continued)

(Continued)

Table 21 (Continued)

Ratio	Source
1:25	North Dearborn Heights, Mich., negotiation agreement
1:28	Oakridge School District, Mich., negotiation agreement
1:30	Sandusky, Mich., negotiation agreement
1:27	Springport, Mich., negotiation agreement
1:25	Western Jackson County, Mich., negotiation agreement
1:25	Whiteford School District, Mich., negotiation agreement
38-39:1000	Minneapolis, Minn., negotiation agreement
1:25	Bellmawr, N.J., negotiation agreement
1:25	Teaneck, N.J., negotiation agreement
1:25 in ADA	Harlandale, Texas, staffing formula
1:30	Seattle, Wash., negotiation agreement
1:26.8 (outer city) 1:19 (inner city)	Racine, Wis., guidelines
Substitute teachers: 15% of teaching staff is superior 10% of teaching staff is adequate	Philadelphia Area School Study Council (90:15)

(Continued)

Table 22

TEACHER-PUPIL RATIOS IN KINDERGARTEN AND NURSERY SCHOOL

Ratio	Source
1 professional + 2 paraprofessionals:15 pupils	AASA (3:89)
3 adults:15 three-year-olds; 3 adults: 20 four-year-olds	Butler (13:63)
1:25 (optimum) 1:20 in sparsely settled areas	Farley (33:8)
1:20 (+ 1 aide)	Hymes (52:19)
1 professional + 1 assistant: 10-12 three-year-olds or 15 four-year-olds	McCleary (63:163)
1 teacher + 1 assistant:15-20 pupils	National Association for the Education of Young Children (71)
1:40-50 (N and K)	Philadelphia Area School Study Council (90:1)
1:25 or less in ADA	Florida statute
1:30 (maximum)	Kansas State Department standard
3:54-75 in ADM + 1 additional teacher for every 25 additional ADM	Kentucky State Department allotment (1972-73)
1:30-38	Ohio State Department standard
1:25 (maximum)	Tennessee State Department standard
1:25 (maximum)	Washington State Department requirement
1:22	Kodiak Island School District, Alaska, negotiation agreement

(Continued)

Table 22 (Continued)

Ratio	Source
1:0-40 2:41-75 3:76-110 4:111-145 5:146-180 6:181-215 7:216-250 8:251-285	Bakersfield City School District, Calif., staffing formula
1:25	Berkeley, Calif., staffing ratio
1:29	Chula Vista, Calif., staffing formula
1:30	Downey, Calif., regulation
1:30	Escondido, Calif., staffing ratio
1:31	La Mesa-Spring Valley School District, Calif., staffing formula
1:30-70	Long Beach, Calif., staffing formula
1:54 (double sessions) 1:28.5 (single session)	San Diego, Calif., staffing formula
1:less than 55 pupils 2:less than 112 pupils 3:112 or more pupils	San Francisco, Calif., staffing formula
1:25	Dade County, Fla., staffing formula
1:25	Marion County, Fla., staffing formula
1:60	Gary, Ind., staffing formula
Enrollment x .02 = teachers	Wichita, Kans., staffing formula

(Continued)

Ratio	Source
1:50	Baltimore County, Md., staffing formula
40:1000	Everett, Mass., negotiation agreement
1:15	Fairhaven, Mass., negotiation agreement
1:56	Albion, Mich., negotiation agreement
1:28	Dearborn, Mich., negotiation agreement
1:28.5	Flint, Mich., negotiation agreement
1:56	Clark County, Nev., negotiation agreement
1:20	Chappaqua, N.Y., negotiation agreement
1:18-22	Greenville, N.Y., negotiation agreement
1:30 (over 32, + 1 aide)	Kingston, N.Y., negotiation agreement
1:30 (lower for disadvantaged)	Cincinnati, Ohio, staffing formula
1:25 (ideal) 1:30 (maximum)	Tulsa, Okla., staffing formula
1:30	Ft. Worth, Texas, staffing ratio
1/2:25 pupils or any fraction thereof	Bellevue, Wash., staffing formula
1:60	Federal Way, Wash., staffing formula
1:25	Rhinelander, Wis., negotiation agreement

Table 23

TEACHER-PUPIL RATIOS FOR ELEMENTARY GRADES

Ratio	Grade	Source
1:25 (optimum) 1:20 in sparsely-settled areas	Elem.	Farley (33:8)

(Continued)

Ratio	Grade	Source
1:25	Elem.	George Peabody College for Teachers (43:50)

(Continued)

Table 23 (Continued)

Ratio	Grade	Source
1:less than 25	1-6	Opinions of Ohio Elementary principals (92:147)
1:20-25	1-6	Philadelphia Area School Study Council (90:2)
1:27 by 1972 1:26 by 1973 1:25 by 1974 (includes special subject teachers)	Elem.	Southern Association of Colleges and Schools (102:25)
8-14:200-350 14-20:350-500 20-32:500-800 32-48:800-1200	Elem.	Wynn (124:10)
Schools of 120-199 in ADA-- 1:23 1:25 Schools of 200-299 in ADA-- 1:24 1:26 Schools of 300 or more in ADA--1:25 1:27	 1 2-12 1 2-12 1 2-12	Florida statute
1:30 maximum	1-8	Indiana State Department rule
1:30 maximum	1-8	Kansas State Department standard
3:54-75 in ADM + 1 additional teacher for each 25 additional in ADM	1-8	Kentucky State Department allotment
1:35 maximum 1:32 (Class A) 1:29 (Class AA)	Elem.	Mississippi State Department standard
1:30 required 1:25 suggested	Elem.	Ohio State Department standard
1:35 maximum 1:25 recommended	Elem.	Oklahoma State Department regulation
1:25 (maximum) 1:30 (maximum)	1-3 4-6	Washington State Department requirement
1:26	Elem.	Anchorage, Alaska, negotiation agreement
1:20 ADA 2:40 ADA 3:75 ADA 4:110 + 1 teacher for each additional 30 in ADA 1:10-19 ADA in isolated areas	1-8	Tennessee State Department standard
1:26	1-6	Kodiak Island School District, Alaska, negotiation agreement
1:30 1:35	1-3 4-6	Bakersfield City School District, Calif., staffing formula
1:25 1:29	1-3 4-6	Berkeley, Calif., staffing formula
1:30	1-6	Chula Vista, Calif., staffing formula
1:30 1:31	1-3 4-5	Downey, Calif., regulation
1:30	1-6	Escondido, Calif., staffing formula
1:30 1:34	1-3 4-6	La Mesa-Spring Valley School District, Calif., staffing formula
1:27 1:32	1-3 4-6	Long Beach, Calif., staffing formula
1:25 (1:20 in disadvantaged) 1:29.7 1:33.75	Jr. 1 1-3 or 4 4-6	San Diego, Calif., staffing formula
1:26 1:31 1:34	1 2-3 4-6	San Francisco, Calif., staffing formula
1:31	1-6	San Jose, Calif., staffing formula
1:25	1-6	Denver, Colo., staffing formula
1:28	Elem.	Douglas County, Colo., negotiation agreement
1:25 1:30	1-2 3-6	Brevard County, Fla., staffing formula
1:31.5	1-6	Dade County, Fla., staffing formula

(Continued)

(Continued)

Table 23 (Continued)

Ratio	Grade	Source
1:25	1-2	Lake County, Fla.,
1:30	3-6	staffing formula
1:25	1	Marion County, Fla.,
1:29	2-5	staffing formula
37.9:1000	Elem.	Decatur, Ill., negotiation agreement
1:25	K-8	Riverside, Ill., negotiation agreement
1:30	1-6	Gary, Ind., guidelines
.04 x pupils = teachers	1-3	Wichita, Kans., staffing formula
.035 x pupils = teachers	4-6	
1:28	1-3	Baltimore County, Md.,
1:30	4-6	staffing formula
40:1000	Elem.	Bourne Supervisory Union, Mass., negotiation agreement
40:1000	1	Everett, Mass., negoti-
33:1000	2-6	ation agreement
1:25	1-6	Fairhaven, Mass., negotiation agreement
40:1000	Elem.	Scituate, Mass., negotiation agreement
1:28	1-6	Albion, Mich., negotiation agreement
1:26	Elem.	Ann Arbor, Mich., negotiation agreement
1:28.5	Elem.	Battle Creek, Mich., negotiation agreement
1:28	1-6	Dearborn, Mich., negotiation agreement
1:28	Elem.	Dowagiac, Mich., negotiation agreement
1:30	Elem.	Escanaba, Mich., negotiation agreement
1:30.5	1-6	Flint, Mich., negotiation agreement
1:32	Elem.	Lapeer, Mich., negotiation agreement
1:28.25	Elem.	Livonia, Mich., negotiation agreement
1:29	Elem.	Southfield, Mich., negotiation agreement
1:27 per building (1 clerk + 1 aide or 2 aides = 1 teacher)	Elem.	Saginaw Township, Mich., negotiation agreement
35.52:1000	Elem..	Warren, Mich., negotiation agreement
35:1000	Elem.	Wayne, Mich., negotiation agreement
1:28	1-2	Clark County, Nev., nego-
1:30.5	3-6	tiation agreement
1:25	1-5	Chappaqua, N.Y., negotiation agreement
1:27.5	Elem.	Greece Central School District, N.Y., negotiation agreement
1:20-24	1-3	Greenville, N.Y., nego-
1:24-27	4-6	tiation agreement
1:30	1-6	Cincinnati, Ohio, staffing formula
1:30 per building	Elem.	Oregon, Ohio, negotiation agreement
1:28.5 per building	Elem.	Dayton, Ohio, negotiation agreement
1:30	1-3	Tulsa, Okla., staffing
1:35	4,6	formula
1:27	5	
1:27	Elem.	Penn-Delco School District, Pa., negotiation agreement
1:30	1-3	Ft. Worth, Texas,
1:35	4-6	staffing formula
1:25	1-3	Bellevue, Wash., staff-
1:28.8	4-6	ing formula
1:25	1	Federal Way, Wash.,
1:32 (in disadvantaged schools, enrollment minus 30 ÷ 30)	2-6	staffing formula
1:25	Elem.	Pardeeville, Wis., negotiation agreement
1:25	1-3	Rhinelander, Wis., nego-
1:30	4-8	tiation agreement
1:25	Elem.	Wisconsin Rapids, Wis., negotiation agreement

(Continued)

Table 24

TEACHER-PUPILS RATIOS IN MIDDLE SCHOOLS

Ratio	Source
For middle school of 700-800: 4 Foreign language 3 Reading/math 8 Unified arts 4 Health and P.E. 5 Special (e.g., typing) + teaching teams	Grooms (46:66)
1:20 (exemplary) 1:25 (maximum)	North Central Association (83:209)
1:31 in grade 6 1:32 in grades 7 and 8	Downey, Calif., regulation
1:30	Marion County, Fla., staffing formula
45.5:1000	Decatur, Ill., negotiation agreement
No. of students a week ÷ no. of periods taught a week = 30 (maximum) per teacher	Saginaw Township, Mich., negotiation agreement
1:25	Chappaqua, N.Y., negotiation agreement

(Continued)

Table 25

TEACHER-PUPIL RATIOS IN JUNIOR HIGH SCHOOLS

Ratio	Source
5-12:101-300 12-24:301-600 24-40:601-1000 40-80:1001-2000	Gruhn and Douglass (47:360)
1:20 (exemplary) 1:25 (maximum)	North Central Association (83:209)
1:20-30 pupils + special teachers	Philadelphia Area School Study Council (90:2)
1:20	Riggs (95:110)
Art- 1-2:500-800 in ADM 2-3:800-1200 Music- 1-2:500-800 2-4:800-1200 Homemaking- 1-3:500-800 4-6:800-1200 Industrial arts- 1-3:500-800 4-6:800-1200 Others- 20-28:500-800 28-42:800-1200	Wynn (124:10)
1:27	Ohio State Department standard
1:35	Kodiak Island School District, Alaska, negotiation agreement
4:51-71 in ADM 5:72-93 in ADM 6:94-116 in ADM 7:117-142 in ADM 8:143-161 in ADM 9:162-189 in ADM 10:190-209 in ADM 11:210-240 in ADM 12:241-262 in ADM 13:263:283 in ADM 14:284-318 in ADM 15:319-356 in ADM 16:357-395 in ADM 17:396-437 in ADM + 1:25 in ADM thereafter	Kentucky State Department allotment
1:23 in grades 7 and 8 1:24 in grade 9	Berkeley, Calif., staffing formula
1:28.3 (including music)	La Mesa-Spring Valley School District, Calif., staffing formula
1:29 in schools of 1100 or more 1:27 in schools of less than 1100	San Francisco, Calif., staffing formula
Schools of 1200 or more--1:22 Schools of less than 1200--1:21 (including principal and assistants)	San Jose, Calif., staffing formula

(Continued)

TABLE 25 (Continued)

Ratio	Source
1:23	Douglas County, Colo., negotiation agreement
1:30 2 music teachers per school 2 P.E. teachers per school	Brevard County, Fla., staffing formula
Music- 1:less than 600 pupils 2:600 or more Driver education- 1:150 9th grade pupils P.E.- 1:less than 600 2:600 or more	Lake County, Fla., staffing formula
1:23	Ft. Wayne, Ind., negotiation agreement
1:21 Corrective reading- 1 per school	Baltimore County, Md., staffing guidelines
1:20	Dearborn, Mich., negotiation agreement
1:27	Stephenson, Mich., negotiation agreement
Total daily pupil periods ÷ 150 = teachers (in disadvantaged areas ÷ by 146)	Minneapolis, Minn., negotiation agreement
1:28.5	Clark County, Nev., negotiation agreement
1:30	Columbus, Ohio, negotiation agreement
1:27 per building	Oregon, Ohio, negotiation agreement
1:23.5	Bellevue, Wash., staffing formula
1:25 1 reading teacher per school	Federal Way, Wash., staffing formula

(Continued)

Table 26

TEACHER-PUPIL RATIOS IN SENIOR HIGH SCHOOLS
(Includes four-year high schools)

Ratio	Source
Art- 1:125 in class Vocal music- 1:300 pupils Instrumental music- 1:100 in class P.E.- 1:300 pupils	New York State Teachers Association (82:9)
1:20 (exemplary) 1:25 (maximum)	North Central Association (83:185-86)
1:20 Reading specialists- 1:1000	Opinions of Ohio secondary principals (92:147)
1:20 + special teachers	Philadelphia Area School Study Council (90:2)
Driver education teachers - 1:140 in 10th grade (or 1/5:28)	Delaware State Department standard
1:24	Indiana State Department rule
Art- 1-2:500-1200 in ADM Music- 1-2:500-800 1-3:800-1200 Homemaking- 1-2:500-800 2-4:800-1200 Industrial arts- 1-2:500-800 2-4:800-1200 Others- 22-30:500-800 32-50:800-1200	Wynn (124:10)
1:30 (maximum) 1:25 (Class AA)	Mississippi State Department accreditation standard
1:27	Ohio State Department standard
1:30 (maximum) 1:27 (Level I)	South Dakota State Department accreditation standard

(Continued)

Table 26 (Continued)

Ratio	Source
4:51-71 in ADM 5:72-93 in ADM 6:94-116 in ADM 7:117-142 in ADM 8:143-161 in ADM 9:162-189 in ADM 10:190-209 in ADM 11:210-240 in ADM 12:241-262 in ADM 13:263-283 in ADM 14:284-318 in ADM 15:319-356 in ADM 16:357-395 in ADM 17:396-437 in ADM + 1:25 in ADM thereafter Enrichment teachers - 2:76-150 in ADM 4:151-300 in ADM + 2:300 in ADM (or major fraction) thereafter	Kentucky State Department allotments
4:75 in ADA 5:100 in ADA 6:125 in ADA 7:141 in ADA 8:156 in ADA 9:175 in ADA 10:200 in ADA 11:227 in ADA 12:254 in ADA 13:281 in ADA 14:308 + 1 teacher for each additional 30 pupils in ADA	Tennessee State Department regulation
1:25	Washington State Department guideline
1:35	Kodiak Island School District, Alaska, negogiation agreement
1:24	Berkeley, Calif., staffing formula
$\frac{6 \times \text{enrollment}}{143}$ (decreasing to $\frac{6 \times \text{enrollment}}{140}$)	Chaffey Union High School District, Calif., negotiation agreement
1:26 in ADA	Huntington Beach Union High School District, Calif., staffing formula
1:31	Jefferson Union High School District, Calif., negotiation agreement
1:29 in schools of 1500 or more 1:27 in schools of less than 1500	San Francisco, Calif., staffing formula

(Continued)

Ratio	Source
Schools of less than 1200-- 1:21 (including principal and assistants) Schools of 1200 or more-- 1:22 (including principal and assistants)	San Jose, Calif., staffing formula
1:19	Douglas County, Colo., negotiation agreement
1:30 1 reading teacher per school 2 music teachers per school ROTC - 1 officer (or 2 enlisted men) per school + 1 enlisted man for first 150 enrollees + 1 enlisted man for each additional 100 enrollees	Brevard County, Fla., staffing formula
1:26 in ADA if enrollment less than 1000 pupils 1:27 in ADA if enrollment 1000 or more Music- 1:less than 600 pupils 2:600 or more ROTC- 2 per school	Lake County, Fla., staffing formula
1:30	Marion County, Fla., staffing formula
45.5:1000	Decatur, Ill., negotiation agreement
60:1000	Rockford, Ill., negotiation agreement
1:25	Ft. Wayne, Ind., negotiation agreement
1:27.5	Gary, Ind., staffing formula
1:21 (regular) 1:17 (vo-tech) Corrective reading- 1 per vo-tech school	Baltimore County, Md., staffing guidelines

(Continued)

Table 26 (Continued)

Ratio	Source
60:1000	Bourne Supervisory Union, Mass., negotiation agreement
33:1000 Shop- 1:20	Everett, Mass., negotiation agreement
1:25 (academic) 1:40 (P.E.)	Fairhaven, Mass., negotiation agreement
60:1000	Scituate, Mass., negotiation agreement
1:24	Charlevoix, Mich., negotiation agreement
1:30	Clarkston, Mich., negotiation agreement
1:19.5	Dearborn, Mich., negotiation agreement
1:29	Livonia, Mich., negotiation agreement
No. of students a week ÷ no. of periods taught a week = 30 (maximum) per teacher (60 for P.E., music, typing)	Saginaw Township, Mich., negotiation agreement
1:27	Stephenson, Mich., negotiation agreement
44.9:1000	Warren, Mich., negotiation agreement
36.3:1000	Wayne, Mich., negotiation agreement
Total daily pupil periods ÷ 140 = number of teachers	Minneapolis, Minn., negotiation agreement
1:25.5	Clark County, Nev., negotiation agreement
1:25	Chappaqua, N.Y., negotiation agreement
1:19	Greece Central School District, N.Y., negotiation agreement
Music- 1:450 P.E.- 1:300	Liberty, N.Y., negotiation agreement
Art- 1:100-125 P.E.- 1:300 Vocal music- 1:300 Instrumental music- 1:125	Whitney Point, N.Y., negotiation agreement
1:30	Columbus, Ohio, negotiation agreement
1:23	Penn-Delco School District, Pa., negotiation agreement
1:20	Bellevue, Wash., staffing formula
1:25 1/2 reading teacher per school	Federal Way, Wash., staffing formula

(Continued)

Table 27

ELEMENTARY SCHOOL SPECIAL SUBJECT TEACHERS

Subject area	Ratio	Source
Remedial teachers, all areas, K-12	1:2000-1:3000	Bonham (11:48)
Special service units, all areas, 1-12	No. of classroom teachers ÷ 20	Harlandale School District, Texas, staffing formula
Art	1:500 pupils	New York State Teachers Association (82:9)
Vocal music	1:500 pupils	
Instrumental music	1:120 pupils in class	
P.E.	1:275 pupils	
Vocal music	1:500 pupils	Opinions of Ohio elementary principals (92:147)
Instrumental music	1:1000 pupils	
Art	1:500 pupils	
P.E.	1:500 pupils	

(Continued)

Table 27 (Continued)

Subject area	Ratio	Source
Art	1:500 pupils	Sessions (100:174)
Instrumental music	1:500 pupils	
P.E.	1:500 pupils	
Helping teachers	1-1/2-2:200-350 pupils 2-4:350-500 pupils 4-6:500-800 pupils 6-8:800-1200 pupils	Wynn (124:10)
Instrumental music (7 and 8)	1 per school	Bakersfield City School District, Calif., staffing formula
Industrial arts (7 and 8)	1:333-542 pupils 2:543 or more	
Home economics (7 and 8)	1:333-367 pupils 2:368 or more	
Reading reteaching (grades 1-3)	1:60 qualified pupils	San Diego, Calif., staffing formula
P.E.	1:0-500 pupils 2:over 500 pupils	Brevard County, Fla., staffing formula
Music	1 per school	
P.E. (1-6)	1:500 pupils	Lake County, Fla., staffing formula
Music (1-6)	1:500 pupils	
P.E.	1:500 pupils	Volusia County, Fla., negotiation agreement
Music	1:500 pupils	
Art	1:500 pupils	
Instrumental music	.5:less than 700 pupils 1:700 or more	Baltimore County, Md., staffing formula
Vocal music, P.E., and Art	.5 for every 3 classrooms (minimum .5 per area per school))	
Corrective reading	.5:less than 700 pupils 1:700 or more pupils	
Art (special education)	1:200 pupils	
P.E. (special education)	1:200 pupils	
Music (special education)	1:200 pupils	
Art	1:540 pupils	Montgomery County, Md., negotiation agreement
Music	1:540 pupils	
P.E.	1:450 pupils	
Special subject teachers, all areas	6.46:1000 pupils	Warren, Mich., negotiation agreement
Vocal music	1:750 pupils a week	Kingston, N.Y., negotiation agreement
Art	1:750 pupils	
P.E.	1:240-250 pupils a day	
Music (1-12)	1:450 pupils	Liberty, N.Y., negotiation agreement
P.E. (1-12)	1:300 pupils	
Art	1:500-600 pupils	Olean, N.Y., negotiation agreement
Vocal music	1:300 pupils	
Instrumental music	1:125 pupils in class	
P.E.	1:275 pupils	
Art	1:500-600 pupils	Whitney Point, N.Y., negotiation agreement
Music	1:500 pupils	
P.E.	1:275 pupils	

Table 28

SCHOOL LIBRARIANS

Recommended ratio	Level	Source
1:40-50 teachers	All levels	AASA (4:113)
1 resource center librarian per school	Middle school	Alexander (1:124)
1:300 pupils or major fraction thereof for first 900 pupils; 1:400 thereafter 1/5:75 pupils 1/2:150 pupils	All levels	American Association of School Librarians (29:11)
1:750 (maximum)	Junior high	Conant (20:34)
1/6:less than 100 pupils 1/3-1/2:100-300 pupils 1/2-1:300-800 pupils 1-2:800-1500 pupils 2-4:1500-3000 pupils	Secondary	Douglass (30:56)
1:500 in ADA	All levels	Gilmer-Aikin Committee in Texas (110:20)
1/3-2/3:101-300 pupils 1:301-600 pupils 1-2:601-1000 pupils 2-3:1001-2000 pupils	Junior high	Gruhn and Douglass (47:360)
1 part-time as minimum per school 1:500 or major fraction thereof + 1 additional for each 700 or major fraction thereof	Secondary	Jackson (56:50)
1 per school + nonprofessional help	Middle school	Kindred (60:431)
2.15:1000 pupils	District-wide	McKenna (67:36)
1:600 pupils	District-wide	NEA Research Division (75:16)
1 per school	All levels	New York State Teachers Association (82:12)
1 audiovisual and library specialist:400 or more 1/2 audiovisual and library specialist:less than 400 pupils	Junior high and middle school	North Central Association (83:214)
1 per building	Elementary	Opinions of Ohio elementary principals (92:147)
1:1000 pupils	Secondary	Opinions of Ohio secondary principals (92:147)
1 per school	All levels	Sessions (100:174)
1/2:less than 12 teachers 1:12-29 teachers (+ 1/2 clerical) 1:30 or more teachers (+ 1 clerical)	Elementary	Southern Association of Colleges and Schools (102:24)
1:1500 pupils	Elementary	Stoops and Rafferty (106:322)
1:350-500 pupils 1 + assistants:500-1200 pupils 1 + assistants:500 or more in ADM	Elementary Secondary	Wynn (124:10)

(Continued)

Table 28 (Continued)

Recommended ratio	Level	Source
1 per school (desirable) 1 per school (required) Desirable: 1 clerical assistant:700-999 pupils 2 librarians:1000-1499 pupils 2 librarians + 2 clerks:1500 or more pupils	Elementary Secondary	Georgia State Department accreditation standards
1/2 per school (minimum) 1:500 pupils (required) 1:15 teachers or less (suggested) 1-1/2:16-30 teachers + 1 for each additional 20 teachers or major fraction thereof (suggested)	Secondary All levels	Indiana State Department rule
1/3:less than 200 pupils 1/2:200-499 pupils 1:500 or more pupils	All levels	Iowa State Department rule
Schools under 100:1 staff member assigned two 55-minute or three 40-minute periods a day Schools of 100-499:three 55-minute or four 40-minute periods a day Schools of 500-1499:1 or more assigned full-time + full-time clerical help Schools of 1500 or more:2 full-time + full-time clerical help	Junior high	Kansas State Department requirement
Schools under 100:two 55-minute or three 40-minute periods a day Schools of 100-199:three 55-minute or four 40-minute periods a day Schools of 200-499:four 55-minute or five 40-minute periods a day Schools of 500-1499:1 or more staff members assigned full-time + full-time clerical help Schools of 1500 or more:2 full-time staff members + full-time clerical help	Senior high	Kansas State Department requirement
1/2 per school (minimum) 1:200 or more pupils (minimum)	Secondary (7-12)	Mississippi State Department accreditation standard
1/2:less than 300 pupils 1:300 or more	Junior high	New Mexico State Department accreditation standard
1/3:less than 200 pupils 1/2:200-500 pupils 1:more than 500 pupils	Senior high	
1-100 pupils:1 librarian period per day 100-300 pupils:2 periods per day 300-500 pupils:1/2-day 500-700 pupils:5 periods per day 700 or more:1 full-time + 1 full-time assistant per 1000 pupils in schools of 2000 or more	All levels	New York State Department regulation
1 per district (required) 1 + 1 aide:500 or more in ADM (suggested)	Elementary	Ohio State Department standards
1/2:less than 300 in ADM 3/4:301-499 in ADM 1:500 or more in ADM	Junior high	
1/2:less than 300 in ADM 1:300 or more in ADM	Senior high	
Schools under 100 pupils:1 period per day Schools of 200-499:1/2 day Schools of 500-1499:1 full-time Schools of 1500 or more:2 full-time	Secondary	Oklahoma State Department regulation

(Continued)

Table 28 (Continued)

Recommended ratio	Level	Source
1/2:15-19 teachers 1:20 or more teachers	Elementary	Tennessee State Department regulation
1/2:13-15 teachers 1:16-53 teachers 2:54 or more teachers	Secondary	
1/2:less than 300 pupils 1:300 or more pupils 2:1000 or more pupils	Secondary	Virginia State Department regulation
1 + 1 full-time clerk:750 pupils or more 1:300 or more pupils	All levels Combined elementary and secondary schools	
Schools of less than 400:enrollment ÷ 400 = librarian time Schools of 400 or more:enrollment ÷ 1200 + 2/3 = librarian time (minus 15% in schools with central cataloguing and processing of books)	Secondary	Washington State Department regulation
1 per school (+ clerical)	Secondary	Huntington Beach Union High School District, Calif., staffing formula
1 per school	Junior high	La Mesa-Spring Valley School District, Calif., staffing formula
1 per school	Junior and senior high	Oakland, Calif., staffing formula
1:1500 or fewer pupils 2:more than 1500 pupils 2 per school	Junior high Senior high	San Francisco, Calif., staffing formula
1 per school 1:1000 pupils 1 + clerks:1001-1200 pupils 1:1000 pupils 2:1000-1200 pupils	Elementary Junior high Senior high	Brevard County, Fla., staffing formula
1:500 pupils 1:less than 1000 pupils 2:1000 or more pupils	Elementary (1-6) Secondary	Lake County, Fla., staffing formula
1/2:less than 300 pupils 1:300-900 pupils 2:900-1800 pupils 2-1/2:1800 or more pupils	All levels	Marion County, Fla., staffing formula
1:500 pupils	Elementary	Volusia County, Fla., negotiation agreement
1 per school 2 per school 1 per school	Elementary Junior and senior high Vo-tech school	Baltimore County, Md., staffing formula
1 per school 1:1299 or fewer pupils 2:1300-1999 pupils 3:2000 or more pupils	Elementary Secondary	Montgomery County, Md., staffing formula

(Continued)

Table 28 (Continued)

Recommended ratio	Level	Source
1:650 (called media specialist)	All levels	Ann Arbor, Mich., negotiation agreement
1 per school 2 per school	Junior high Senior high	Warren, Mich., negotiation agreement
1 per school in lieu of a regular teacher	Secondary	Clark County, Nev., guideline
1:625-750 pupils	Elementary	Kingston, N.Y., negotiation agreement
1:400 pupils	All levels	Liberty, N.Y., negotiation agreement
1:500 pupils	All levels	Olean, N.Y., negotiation agreement
1:200-999 pupils 2:1000-1999 pupils 3:2000 or more pupils	All levels	Cincinnati, Ohio, negotiation agreement
1 per school	Junior and senior high	Columbus, Ohio, guideline
1 per school 2 per school	Junior high Senior high	Bellevue, Wash., staffing formula
Enrollment ÷ 1200 + 2/3 = library staff	Junior and senior high	Federal Way, Wash., staffing formula

Table 29

INSTRUCTIONAL AIDES OR PARAPROFESSIONAL ASSISTANTS

Position	Recommended ratio	Source
Early childhood education paraprofessional or volunteer	2:15 children + 1 teacher	AASA (3:89)
Kindergarten aide	1:20 children + 1 teacher	Hymes (52:19)
Nursery school assistant	1:1 teacher (40-50 pupils)	Philadelphia Area School Study Council (90:1)
Paraprofessional aides	10:1000 in ADA	Texas Governor's Committee (110:20)
Instructional aide	1 per special class 3 per Title I school	Chula Vista, Calif., staffing formula
Noon duty supervisors (elementary)	3 hours per day:0-499 pupils 4 hours per day:500-799 pupils 5 hours per day:800-1099 pupils	Ocean View School District, Calif., staffing formula
Teacher aides	1 full-time teacher can be exchanged for 18 hours of aide time	Rowland School District, Calif., staffing formula

(Continued)

Table 29 (Continued)

Position	Recommended ratio	Source
Noontime supervisors (elementary)	2:0-400 pupils 3:401-650 pupils 4:651-1000 pupils 5:1001 or more pupils	San Francisco, Calif., staffing formula
Paraprofessionals (2 years of college and working toward professional certification) Apprentice teachers (high school diploma and working toward professional certification) Special teacher aides (high school diploma or up to two years of college)	Allotments for these positions may be deducted from earned units of teachers, with a limit of one unit in schools of less than 20 teachers, and two units in schools of 20 or more teachers: 2 paraprofessionals = 1 teacher 2-1/2 apprentice teachers = 1 teacher 3 special teacher aides = 1 teacher	Lake County, Fla., staffing formula
Teacher aides: Kindergarten Grade 1 Grades 2-8 Grades 9-12 Library	 1:1 teacher unit 1:2 teacher units 1:4 teacher units 1:10 teacher units 1 per each library	Marion County, Fla., staffing formula
Instructional aides (elementary)	180 duty days @ 4 hours per day: 1:0-299 pupils 2:300-599 pupils 3:600-899 pupils 4:900 or more pupils	Palm Beach County, Fla., staffing formula
Teacher assistant and teacher aide	In total allotment of teachers, 2 teacher assistants = 1 teacher; 3 teacher aides = 1 teacher	Volusia County, Fla., staffing formula
Instructional aides Elementary Junior high Senior high Vo-tech schools	 .5 instructional materials aide:less than 700 pupils 1 instructional materials aide:700 or more pupils 1 for science 1 for language lab 1 for science 1 for language lab 1 for instructional materials 1 for instructional materials	Baltimore County, Md., staffing formula
Lunchroom aides (elementary)	4 per school (3-6 hours daily in schools of less than 700; 6-8 hours daily in schools of 700 or more)	
Library aides (secondary)	1:799 or fewer pupils 2:800-1599 pupils 3:1600 or more pupils	Montgomery County, Md., staffing formula
Aides (elementary)	1:799 or fewer pupils 2:800 or more pupils	
Aide	1 aide + 1 clerk (3-4 hours daily):each teaching team (1 clerk + 1 aide or 2 aides = 1 teacher	Saginaw Township, Mich., negotiation agreement

(Continued)

Table 29 (Continued)

Position	Recommended ratio	Source
Kindergarten aide	1:every class over 32 pupils	Kingston, N.Y., negotiation agreement
School service aide (elementary)	May be deducted from teacher allowance at the rate of 1 = 1/2 teacher	Bellevue, Wash., staffing formula
Instructional assistant (secondary)	May be deducted from teacher allowance at the rate of 1 = .75 teacher	
Teacher aides and paraprofessionals in primary grades	When average class size exceeds 30-- by 3-12 pupils, add 40 hours of aide time per week by 13-22 pupils, add 40 hours of paraprofessional time per week by 23-32 pupils, add 1 full-time teacher	Milwaukee, Wis., negotiation agreement

Table 30

CLERICAL AND SECRETARIAL ASSISTANCE

Assignment	Recommended ratio	Source
Library clerk	1:600 pupils or major fraction thereof	American Association of School Librarians (29:13)
Personnel clerks	3:1000 certificated personnel	American Association of School Personnel Administrators (5:22)
Clerk or secretary in junior high schools	1:250 pupils	Conant (20:37)
Office secretaries and clerks, secondary schools	1/2-1:100-300 pupils 1-3:300-800 pupils 3-5:800-1500 pupils 5-8:1500-3000 pupils	Douglass (30:56)
Clerical assistance for pupil personnel workers	In every school with one or more counselors	George Peabody College for Teachers (43:45)
Attendance officer, office clerks and secretaries (junior high)	1/2-1:101-300 pupils 1-2:301-600 pupils 1½-3:601-1000 pupils 3-5:1001-2000 pupils	Gruhn and Douglass (47:360)
Stenographer for psychologists	1/4 per psychologist	Hummel and Bonham (51:159,177,195,125)
Clerical assistance for professionals in child accounting	1/2 per professional	
Secretarial assistance for social workers	1/4 per social worker	
Secretarial assistance for guidance counselors	1/4 per counselor	
Clerical (systemwide)	8.99:1000 pupils	McKenna (67:48)
Building secretaries	At least 1 in each school of 6 or more teachers	NEA Office of Professional Development and Welfare (74:32)

(Continued)

Table 30 (Continued)

Assignment	Recommended ratio	Source
School clerks	1:400 pupils, but at least one part-time per school	NEA Research Division (75:16)
Building secretaries (junior high and middle schools)	1 per school	North Central Association (83:204)
Secretaries for: superintendent business manager school principals guidance directors full-time supervisors	1 or more for each	Philadelphia Area School Study Council (90:4)
Secretarial help for: teachers guidance counselors school nurses head custodians vice principal	Secretarial pool	
School secretaries (elementary)	1/2:less than 12 teachers 1:12-29 teachers + additional for 30 or more teachers	Southern Association of Colleges and Schools (102:24)
Library clerks	1/2:12-29 teachers 1:30 or more teachers	
Elementary school secretaries/clerks	1/2-1:200-350 pupils 1:350-500 pupils 1-2:500-800 pupils 2-3:800-1200 pupils	Wynn (124:10)
Junior and senior high secretaries/clerks	2-3:500-800 pupils 3-4:800-1200 pupils	
School secretaries	1 per school (essential) 1 + 1/2-time clerk:25-35 teachers (desirable) 1 + 1 clerk:36 or more teachers (desirable)	Georgia State Department accreditation standards
Clerical assistants to librarians (secondary)	1:700-999 pupils (desirable) 2:1500 or more pupils (desirable)	
Clerical help for food directors	Clerical help for each director desirable	
School secretary: Elementary Secondary	Class A - minimum of 1/2 per school Class AA - 1 per school Minimum requirement:secretarial help in each school Class A - 1/2:300 or fewer pupils 1:over 300 pupils Class AA - 1 full-time per school	Mississippi State Department accreditation standard
Clerical assistance for: Elementary principal Junior high principal Junior high assistant principal	"Some" in schools with less than a 1/2-time principal 15 hours per week in schools with 1/2-time principal 30 hours per week in schools with a full-time principal 1 full-time each 1 per assistant principal	New Mexico State Department accreditation standards

(Continued)

Table 30 (Continued)

Assignment	Recommended ratio	Source
Clerical staff (secondary and combined schools)	1/2:200 or fewer pupils 1:more than 200 pupils + one additional full-time for each additional 400 pupils	Virginia State Department accreditation standard
Clerical assistance to school certificated personnel (secondary)	1:350 students, prorated, is minimum	Washington State Department regulation
Clerks:		Tucson, Ariz., staffing formula
Elementary	1:1-475 pupils 1-1/2:476-675 pupils 2:676 or more pupils	
Junior high	2 per school	
High schools	4.2:1000 pupils, prorated	
School secretaries and clerks (elementary)	Allotted on basis of number of certificated personnel (excluding the principal), as follows: 1:18 or fewer certificated personnel (+ 20 days extra help) 1:19-24 certificated personnel (+ 40 days extra help) 2:25 or more certificated personnel	Bakersfield City School District, Calif., staffing formula
School secretaries and clerks:		Downey, Calif., regulation
Elementary	1 secretary per school + 1/2 clerk for 600 or more pupils	
Middle school	1 secretary and 3 clerk-typists per school	
High school	1 secretary, 1 clerk-stenographer, 7 clerk-typists, 1 account clerk, 1 staff assistant per school	
School building secretarial and clerical assistance:		Fresno, Calif., rule
Junior high	1 per school (minimum) + additional 1/2 when enrollment reaches 350, 550, 800, 1050, 1300, 1550, 1800, 2050, 2300, 2550	
Senior high	1 per school (minimum) + additional 1/2 when enrollment exceeds 300, 500, 700, 900, 1100, 1450, 1800, 2050, 2300, 2550	
Guidance clerical assistance:		
Junior high	1/2 added when enrollment exceeds 800, 1200, 1600	
Senior high	1/2 added when enrollment reaches 800, 1200, 1600, 2000, 2400, and 2800	
School clerk-typists (elementary)	The assignment of clerical help is determined by school enrollment, which is arrived at by factoring the various types of students and adding the results. K-6 students have a factor of 1; EH, TMR, and EMR, a factor of 1.1; Grade 7 and 8 students and mentally gifted minors, a factor of 1.3. Clerical hours are then assigned as follows: 8 hours a week:650 pupils 16 hours a week:700 pupils 24 hours a week:750 pupils 32 hours a week:800 pupils 40 hours a week:850 pupils	Ocean View Elementary School District, Calif., staffing formula

(Continued)

Table 30 (Continued)

Assignment	Recommended ratio	Source
Stenographic personnel (secondary):		Huntington Beach Union High School District, Calif., staffing formula
High school secretary	1 per school	
Administrative secretary	1 per school	
Secretary	1:1501-2350 pupils 2:2351-3750 pupils (1 if only 1 assistant principal) 3:3751 or more pupils (2 if less than 4 assistant principals assigned)	
Stenographer/clerk	1:2701-5150 pupils 2:5151 or more pupils	
Clerical personnel (secondary):		
Senior accounting clerk	1 per school	
Senior clerk-typist	4:1001-2700 pupils 5:2701-3400 pupils 6:3401-4450 pupils 7:4451 or more pupils	
Intermediate clerk-typist	1:1001-2350 pupils 2:2351 or more pupils	
Clerk-typist	2:1001-3050 pupils 3:3051-3750 pupils 4:3751-4100 pupils 5:4101-4450 pupils 6:4451-5150 pupils 7:5151 or more pupils	
Instructional classified personnel (secondary):		
A-V textbook assistant	1 per school	
School clerical staffing (junior high)	1 secretary per junior high school 1 clerk-typist:375 students or portion thereof	La Mesa-Spring Valley School District, Calif., staffing formula
Health clerk (junior high)	2 hours per day of assigned nurse time	
School secretaries	Allocation of school secretaries and clerks is based on a formula of dollar allocations in ADA, as follows: Elementary secretaries, $10.20 per pupil in ADA Intermediate secretaries, $9.45 per pupil in ADA High school secretaries, $4.55 per pupil in ADA Intermediate clerks, $8.40 per pupil in ADA High school clerks, $32.75 per pupil in ADA The total income in each category is then divided by standard cost figures to arrive at the number of each type of personnel allotted to the school; the standard cost figures are as follows: Elementary secretaries, $5870 a year Intermediate secretaries, $5933 a year High school secretaries, $6815 (10-month) or $7497 (11-month) Intermediate clerks, $4865 a year High school clerks $5250 (10-month) or $5775 (11-month)	Rowland School District, Calif., staffing formula

(Continued)

Table 30 (Continued)

Assignment	Recommended ratio	Source
School clerical/secretarial:		Oakland, Calif., staffing formula
Elementary	6 hours per day:up to 200 pupils + 20 hours of extra help annually	
	6.5 hours per day:201-300 pupils + 24 hours of extra help annually	
	6.75 hours per day:301-450 pupils + 48 hours of extra help annually	
	7.0 hours per day:451-600 pupils + 75 hours of extra help annually	
	7.5 hours per day:601-850 pupils + 80 hours of extra help annually	
	11.25 hours per day:851-1000 pupils + 110 hours of extra help annually	
	13.25 hours per day:1001-1200 pupils + 125 hours of extra help annually	
	15.0 hours per day:1201-1500 pupils + 145 hours of extra help annually	
	17.0 hours per day:1500 or more pupils + 160 hours of extra help annually	
Junior high schools - Regular staff	20.75 hours per day:500-850 pupils + 210 hours extra help annually	
	22.5 hours per day:851-1000 pupils + 270 hours extra help annually	
	24.5 hours per day:1001-1200 pupils + 335 hours of extra help annually	
	26.25 hours per day:1201-1400 pupils + 395 hours of extra help annually	
	28.25 hours per day:1400 or more pupils + 460 hours of extra help annually	
Counseling staff	3.75 hours per day:500-850 pupils	
	5.75 hours per day:851-1000 pupils	
	7.5 hours per day:1001-1200 pupils	
	9.5 hours per day:1201-1400 pupils	
	11.25 hours per day:1400 or more pupils	
Senior high schools	67.5 hours per day:1001-1200 pupils + 750 hours of extra help annually	
	71.25 hours per day:1201-1800 pupils + 775 hours of extra help annually	
	75.0 hours per day:1801-2400 pupils + 850 hours of extra help annually	
	78.75 hours per day:2401-3000 pupils + 925 hours of extra help annually	
Clerical staff:		San Jose, Calif., staffing formula
Elementary	1:1-599 pupils	
	1-1/2:600-749 pupils	
	2:750 or more pupils	
Junior high	3:1-800 pupils	
	4:801-1100 pupils	
	5:1101-1400 pupils	
	6:1401-1700 pupils	
	7:1701 or more pupils	
Senior high	5:1-750 pupils	
	6:751-1075 pupils	
	6-1/2:1076-1400 pupils	
	7:1401-1800 pupils	
Secretary and clerk-typist:		San Mateo City School District, Calif., staffing formula
K-5 and K-6 schools	1 secretary:550 or fewer pupils	
	1 secretary + 1/2 clerk-typist:551-750 pupils	
	1 secretary + 1 clerk-typist:751 or more pupils	
Middle and junior high	1 secretary + 1 clerk-stenographer	
	1 clerk-typist for assistant principal	

(Continued)

Table 30 (Continued)

Assignment	Recommended ratio	Source
School clerks:		San Francisco, Calif., staffing formula
Elementary	6 hours per day:399 or fewer pupils 8 hours per day:400-599 pupils 12 hours per day:600-799 pupils 16 hours per day:800-999 pupils 20 hours per day:1000 or more pupils	
Junior and senior high	1 (12-month):750 or fewer pupils 1 (12-month) + 1 school year clerk:751-999 pupils 2 (12-month):1000 or more pupils + 1 school-year clerk for every 500 additional pupils or major fraction thereof	
Textbook ordering clerk (junior and senior high)	1 school-year clerk	
Library clerk (junior and senior high)	1 school-year clerk	
Clerical help for assistant principal:		
Junior high	1/2 school-year clerk	
Senior high	1 school-year clerk	
School secretaries	Based on instructional units (25 pupils in grade 1 or 27 pupils in grades 2-12 = 1 instructional unit), as follows: 1 full-time:1-19 units 1-1/2:20-29 units + additional 1/2 assigned to schools at each additional 5-unit interval (e.g., 30-34 = 2) up to 49 units; thereafter, additional help assigned @ 1/2 for each 10-unit interval (e.g., 50-59), up to maximum of 8 full-time secretaries (130 or more units).	Hillsborough County, Fla., staffing formula
Library clerk	1 per school with 61 or more instructional units	
School secretary:	Based on teacher unit allocations, as follows:	Lake County, Fla., staffing formula
Elementary	4 hours daily:6-8 units 6 hours daily:9-11 units 8 hours daily:12-19 units 10 hours daily:20-23 units 12 hours daily:24-25 units 16 hours daily:more than 25 units	
Secondary	8 hours daily:15-18 units 10 hours daily:19-22 units 12 hours daily:23-26 units 14 hours daily:27-30 units 16 hours daily:31-34 units + 2 hours daily additional for schools with instructional units falling within each additional 5-unit interval (8-hour secretaries are employed on a 12-month contract; additional help on 10-month schedule)	
School secretary	Based on teacher unit allocations, as follows: 1:0-24 teacher units 1.5:25-36 teacher units 2.0:37-48 teacher units 2.5:49-60 teacher units 3.0:61-72 teacher units 3.5:73-84 teacher units 4.0:85-96 teacher units	Marion County, Fla., staffing formula

(Continued)

Table 30 (Continued)

Assignment	Recommended ratio	Source
School secretaries:		Lee County, Fla., staffing formula
Elementary	1 bookkeeper:2-7 teachers 1 secretary:8-18 teachers 1-1/2 secretary:19-29 teachers 1 secretary/bookkeeper + 1 clerk:30 or more teachers	
Middle school	1 bookkeeper + 1-1/2 secretaries per school	
Senior high	1 registrar + 1 secretary + 1 bookkeeper + 1 clerk per school	
School secretaries:		Palm Beach County, Fla., staffing formula
Elementary	1:0-599 pupils 1-1/2:600-799 pupils 2:800-999 pupils 2-1/2:1000-1199 pupils 3:1200-1399 pupils	
Junior and senior high	Same as elementary + 1/2 for each 200 additional pupils	
Library clerks	1:500-1499 pupils 2:1500 or more pupils	
School secretaries (elementary)	1:600 or fewer pupils 1-1/2:601-850 pupils 2:851-1150 pupils 3:1151-1500 pupils	Gary, Indiana, staffing formula
Guidance secretaries (secondary)	1-1/2 hours per day:1 counselor	
Library clerks (middle school)	3.5 hours per day:1500 or fewer pupils 6 hours per day:1501 or more pupils	
Library clerks (high school)	6 hours per day:2000 or fewer pupils 7 hours per day:2001-2500 pupils 10.5 hours per day:2501 or more pupils	
School clerical employees:		New Orleans, La., regulation
Elementary	1 secretary + 1 clerk:1000 or more pupils 1 secretary:450-999 pupils 1 clerk:less than 450 pupils	
Secondary	1 secretary + 2 clerks + 1 library clerk:1500 or more pupils 1 secretary + 1 clerk + 1 library clerk:1000-1499 pupils 1 secretary:450-999 pupils 1 secretary in senior highs or 1 clerk in junior highs:less than 450 pupils	
School clerical, technical, and secretarial positions	1/2:250 or fewer pupils 1:251-400 pupils 1-1/2:401-600 pupils 2:601-800 pupils + 1/2 for each additional 200 pupils	Anne Arundel County, Md., staffing formula
Guidance office clerk	1 per secondary school	
Library clerk	1 per secondary school	
School secretary (12-month), teacher secretary (10-month), and school clerk (12-month) in elementary schools	Schools with 600 or fewer pupils, with administrative assistant: 1 school secretary, 1/2 teacher secretary, 1 school clerk with vice principal: 1 school secretary, 1 teacher secretary, 1/2 school clerk School with 700 or more pupils: 1 school secretary, 1-1/2 teacher secretary, 1/2 school clerk	Baltimore County, Md., staffing formula

(Continued)

Table 30 (Continued)

Assignment	Recommended ratio	Source
Secretarial/clerical personnel in secondary schools	Each junior and senior high: 1 secretary (12-month) 1 stenographer (12-month) 1 accounts clerk (12-month) 1 clerk-typist (12-month) Junior highs under 1500: + 1-1/2 stenographer or clerk-typist (10-month) Junior highs 1500 or more: + 2 stenographers or clerk-typists (10-month) Senior highs under 1500: + 2-1/2 stenographers or clerk-typists (10-month) Senior highs 1500-1800: + 2 stenographers or clerk-typists (10-month) + 1 administrative aide Senior highs over 1800: + 3 stenographers or clerk-typists (10-month) + 1 administrative aide	Baltimore County, Md. (Continued)
School secretaries:		Montgomery County, Md., staffing formula
Elementary	1:399 or fewer pupils 1-1/2:400-599 pupils 2:600-799 pupils 2-1/2:800-999 pupils 3:1000-1199 pupils 3-1/2:1200 or more pupils	
Secondary	1-1/2:less than 600 pupils 2:600-749 pupils 3:750-899 pupils 3-1/2:900-1049 pupils 4-1050-1199 pupils 5:1200-1349 pupils 5-1/2:1350-1499 pupils 6:1500-1649 pupils 6-1/2:1650-1799 pupils 7:1800-2099 pupils 8:2100-2399 pupils 9:2400 or more pupils	
Teacher-clerk assistance:		
Elementary	29 hours per year per full-time teacher 10 hours per year per part-time teacher	Ann Arbor, Mich., negogiation agreement
Secondary	1:50 teachers, with goal of 1:40 teachers	
School clerical/secretarial:		Clark County, Nev., regulation
Elementary	1/2:200 pupils (or major fraction thereof when enrollment is less than 400)	
Junior high	1:350 pupils (or major fraction thereof when enrollment is less than 1050)	
Senior high	1:300 pupils (or major fraction thereof when enrollment is less than 1500)	
School secretaries:		Bellevue, Wash., staffing formula
Elementary	1 secretary per elementary school	
Secondary	1590 days of secretarial time per high school (includes library secretary)	
Library clerk:		
Junior high	1:2 librarians (media specialists)	
Senior high	1:each librarian (media specialist)	

(Continued)

Table 30 (Continued)

Assignment	Recommended ratio	Source
Clerical help for nurses:		Bellevue Wash. (Continued)
Pupil personnel office	20 hours per week	
Junior and senior high	1 per building	
Clerical help for social workers at district office	1 full-time	
Secretarial help for counselors	1 per grade level per senior high 1 per junior high school	

Table 31

FOOD SERVICE PERSONNEL

Position	Recommended ratio	Source
Director of cafeterias (secondary schools)	1/3-1/2:100-300 pupils 1/2-1:300-800 pupils 1:800-3000 pupils	Douglass (30:56)
Supervisor of school lunches	1:4-10 units or each 1500-2000 pupils served	Second National School Lunch Conference (41:33)
Supervisor of school lunches	1:20 school food service programs (minimum essential) 1:10 school food service programs (optimum)	Garvue, Flanagan, and Castine (41:50)
Food service employees	1 person @ 8 hours for every 75 meals up to 300; one person for every 100 meals over 300 (local conditions necessitate adaptations of this formula; author recommends conducting a time-and-motion study on each task, determining total time in minutes for total tasks).	Roe (97:273)
Food service employees (centrally controlled program in elementary schools)	Schools preparing and serving complete meal only: 1 @ 8 hours:less than 70 meals daily 1 @ 8 hours + 1 5-hour:75-125 meals 2 @ 8 hours + 2 5-hour:150-275 meals 3 @ 8 hours + 2 5-hour:350-500 meals 4-5 @ 8 hours + 2-3 @ 5 hours:750-1000 meals + 5 additional man-hours per 100 meals over 1000 meals daily Schools preparing and serving complete meal and a la carte items: Not recommended in schools that serve less than 250 meals daily 4 @ 8 hours + 2 @ 5 hours:350-500 meals 5 @ 8 hours + 4 @ 5 hours:750-1000 meals + 8 additional man-hours per 100 meals over 1000 meals daily Schools serving, but not preparing, complete meal only: 1 @ 5 hours:less than 70 2 @ 5 hours:75-125 3 @ 5 hours:150-275 Not recommended in schools serving more than 300 meals daily	George and Heckler (42:129)

(Continued)

Table 31 (Continued)

Position	Recommended ratio	Source
Food service employees (centrally-controlled, secondary schools)	Schools preparing and serving plate lunch and a la carte items (minimum of 300 recommended): 300-500 meals a day 1 manager 1 main cook (8-hour) 1 secondary cook (6-hour) 1 baker (8-hour) 1 salad & sandwich (8-hour) + helpers (18-36 man-hours) 1 other person (4-hour) 500-800 meals a day 1 manager 1 main cook (8-hour) 1 second cook (8-hour) 2 bakers (8 hours each) 1 salad & sandwich (8-hour) 1 salad & sandwich (6-hour) + helpers (16-40 man-hours) 1 other person (6-hour) 800-1200 meals a day 1 manager 3 cooks (8 hours each) 3 bakers (8 hours each) 2 salad & sandwich (8 hours each) + helpers (20-52 man-hours) 1 other person (6-hour) 1200-1500 meals a day 1 manager 3 cooks (8 hours each) 3 bakers (8 hours each) 3 salad & sandwich (8 hours each) + helpers (42-66 man-hours) 2 other people (5 hours each)	George and Heckler (42:130)
Cafeteria manager	1:elementary school over 200 in ADM 1 + assistants in secondary schools over 500 in ADM	Wynn (124:10)
Supervisors of school lunch	1 per district with 4 or more schools with lunch programs	Delaware State Department regulation
Food service employees	The following schedule of labor hours (including the manager) is used to determine total labor hours per day: 100-300 lunches = 10 lunches per labor hour 301-375 lunches = 11 lunches per labor hour 376-575 lunches = 12 lunches per labor hour 576-675 lunches = 13 lunches per labor hour 676-775 lunches = 14 lunches per labor hour 776-1000 lunches = 15 lunches per labor hour + 4 hours when choices of Type A are served + 4 hours when base school satellites food + 4 hours for 2 serving lines and 2 cashiers + 2 hours for 2 serving lines and 1 cashier + 2 hours for supplementary nourishment + 1 hour for breakfast In schools serving food for Early Childhood Migrant Units, add 2 lunches per day per migrant student served	Lake County, Fla., staffing formula
Food-service director Manager of cafeterias Food service employees	1 + clerical help:20 schools (desirable) 1 per school (desirable) 1:100 meals or major fraction thereof	Georgia State Department accreditation standard

Table 32

SCHOOL CUSTODIANS

Recommended formula or ratio	Source
Custodial work load formula developed by the California School Business Officials Committee, based on 5 factors, as follows: Number of teachers ÷ 8 = teacher factor Number of pupils ÷ 225 = pupil factor Number of rooms* ÷ 11 = room factor Total square feet in building ÷ 15,000 = square feet factor Total acres of upkept grounds ÷ 2 = grounds factor Add above 5 factors (corrected to 2 decimal places) and divide by 5 to get cleaning custodians needed. *Rooms include all rooms that are to be cleaned by custodians; the average classroom is figured at 1000 square feet; divide large area rooms into equivalent classrooms.	Baker and Peters (8:141-42); Berry (10:84, 86); Pattington (86:49); Hillsborough and Volusia County School Systems, Fla., staffing formula
Four school systems reported variations of the 5-factor custodial work load formula, as follows:	
1. Total staff ÷ 16 Number of students ÷ 250 Number of rooms (1000 square feet units ÷ 14) Building area* (total square feet) ÷ 17,000 Add results of the 4 computations, divide by 4, and adjust to nearest .5 to determine number of custodians *Corridors computed at one-half footage	Bakersfield City School District, Calif., staffing formula
2. Same as California School Business Officials Committee, except no computation for total square footage; thus total of factors is divided by 4 to determine custodians needed.	Lake County, Fla., staffing formula
3. Same as California School Business Officials Committee for teacher, pupil, room, and total square footage factors for elementary schools (omits grounds factor). For secondary schools, uses all 5 factors, adding an age factor to square footage factor. Where applicable, adds to each building a .18 factor for each portable room.	Bellevue, Wash., staffing formula
4. Same as California School Business Officials Committee, except that each principal has leeway in determining how he shall use his building custodial relocation. The units earned may be allocated in any "mix" of the following positions: Maid = .82 unit Custodian = 1.00 unit Head custodian I = 1.15 units Head custodian II = 1.27 units Head custodian III = 1.40 units	Brevard County, Fla., staffing formula
1 custodian:400 pupils (with part-time maid in schools with 600 or more pupils; at least one custodian per school)	NEA Research Division (75:16)
Superior-- 1 custodian per 125 pupils, to be assigned as follows: 1 maintenance (repairs) 1 custodial foreman 1 yard work The rest for general cleaning Adequate-- 1:250 pupils	Philadelphia Area School Study Council (90:18)

(Continued)

Table 32 (Continued)

Recommended formula or ratio	Source
1 custodian for every 10 staff members employed at the school	Robbins and Williams (96)
1 janitor to every 12 classrooms (or equivalent) or 6 for 720 pupils in junior high school	Southern Association of Colleges and Secondary Schools (103:79)
1 custodian for every 8 teachers (desirable)	Georgia State Department accreditation standard
At least one per high school	Virginia State Department accreditation standard
1 interior custodian for each 20,000 square feet of floor space 2 outside groundsmen at each school	Kern Union High School District, Calif., staffing formula
The number of custodians to be provided at each school is based on a dollar allocation formula, based on ADA, as follows: Elementary and intermediate school custodians - $19.11 per pupil in ADA High school custodians - $25.10 per pupil Custodian substitutes - 53¢ per pupil Continuation high schools - $32 per pupil The total amount of money allocated a school is then converted into men, using the following standard cost figures: Senior custodian (elementary and intermediate) - $7519 Head custodian (high school) - $8177 Night custodian (elementary and intermediate) - $6231 Part-time custodian (elementary and intermediate) - $3 an hour High school custodian - $7006 High school equipment handler - $7169 Locker room attendant (high school) - $4441 (9-month, 8-hour) Sweeper - $2429 (9-month, 5-hour)	Rowland Unified Schoc District, Calif., staffing formula

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